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NEW APPROACHES TO ASSESSMENT AND PLACEMENT OF MINORITY STUDENTS

A Review for Educators

RONALD J. SAMUDA

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I. An Overview of the Issues

This publication is addressed mainly to teachers. It would seem appropriate therefore to recapitulate some of the basics before commencing any detailed discussion of theory and practice. This review is based on the notion that the problems and pitfalls associated with the assessment and placement of minority students cannot be fully understood without an indepth perusal of the underlying issues. It is surprising and rather unfortunate given the topicality of this subject that little research has been conducted in Canada since the early 1980s.

The sections in this chapter encompass an outline and brief discussion of cultural diversity in the schools, a comparative view of the practice of streaming, the difficulty in placing minority students, the attitudes of teachers and administrators, the assessment of academic potential, the concept of intelligence, and the psychometric factors of reliability and validity in the selection and use of psychological tests. These sections are necessarily brief and cursory in their treatment of the factors but nevertheless are presented as a background and an introduction to the more detailed discussions to follow in subsequent chapters.

1. Cultural Diversity

Before the decade of the sixties, Canada was essentially oriented towards an Anglo-saxon Protestant majority. Like the United States and Australia, it had traditionally subscribed to a deliberate policy of preferential immigration for persons originating from Northwestern Europe, especially the United Kingdom. As a result, even after changes had occurred in immigration policies, the figures for the 1971 census indicated that the proportion of the Canadian population of British origin was 44.6 per cent, of French origin 28.7 per cent, of Native origins 1.4 per cent, and that those who were not British, French or Native in origin accounted for about 25.5 per cent of the population (Burnet, 1984).

Changes in the character of the Canadian population, and particularly the immigrant settlers to Ontario, were prompted by two coincidental events, namely, the shift in immigration procedures, and the introduction of multiculturalism as an official government policy (1971). In 1962, country of origin, and racial barriers as entry requirements, were replaced by an ethnic-blind selection system. This nine-point admission strategy included education and training, personal qualities, occupational demand, occupational skills, age, arranged employment, knowledge of English and French, presence of relatives in Canada and area of destination. The introduction of the point system led to the highest annual

immigration of the post-war period. More importantly, it changed the character of the population by introducing large numbers of visible non-European minorities (Kalbach, 1979).

In 1974, for example, less than 18 per cent of immigrants to Canada originated from the British Isles, while 23 per cent came from southern Europe: Portugal, Italy, Greece and Yugoslavia especially. Newcomers from Asia (with Hong Kong and the Philippines as the major suppliers of workers) exceeded the European figure of 23 per cent (Samuda and Crawford, 1980). The U.S. immigrants amounted to 12 per cent while those from the Caribbean and Africa represented 11 per cent and 5 per cent, respectively. Although the settlement of newcomers has affected all provinces and especially the large cities like Montreal, Edmonton, and Vancouver, metropolitan Toronto alone received (in one peak year) close to 60 per cent of all the immigrant students since Ontario has consistently been the favoured province of new Canadian settlement, and Toronto the ultimate place of residence and work (Green, 1977).

This unprecedented influx of new settlers has had enormous effects on the schools and has compounded the problems of assessment and placement. Over the past twenty-five years teachers, counsellors, and administrators, have been sorely pressed to find the kinds of evaluation procedures that would fairly appraise the capacities of new Canadian students. The practitioners were largely unprepared to cope with the cultural, linguistic, and ethnic diversity that was suddenly a major factor in the functioning of the provincial educational system.

The Ontario government has been at the forefront in supporting the principles of multiculturalism. In 1969, the government's commitment was enunciated in three fundamental objectives, namely: 1) equality of opportunity; 2) access and participation in the social, economic, and political structures; and 3) cultural retention and sharing. In May, 1977, Premier Davis underscored the government's resolve and promulgated a new and more comprehensive multicultural policy. Subsequently, the Ministry of Education issued a curriculum guideline, *The Formative Years*, containing multicultural content. Premier Peterson has also, on several occasions, emphasized the importance of multiculturalism. He has made race relations and anti-racism key concerns of his cabinet.

Under the present guidelines for professional training, all counsellors and principals are required to undertake training in the issues of multiculturalism. Assessment and placement of ethnic minority students in the schools of Ontario are essential elements that the government has sought to address. In particular, the Ontario Ministry of Education has supported the training of teachers in the use of non-biased assessment procedures and in finding new and innovative approaches to the placement of minority students in the schools through non-discriminatory assessment methods.

2. Streaming

Until the fifties, the school systems of Great Britain, the United States, and Canada, depended heavily on the use of psychometric tests to place students into curricular programs. In all three countries, teachers were trained to believe in the efficacy of psychological tests to help in the organization of appropriate and effective programs and methods in the schools. But, it was in Great Britain that the most blatant system of streaming existed as a consequence of the Butler Act of 1944.

The organization of schools into a three-part system of Secondary Grammar, Secondary Modern, and Secondary Technical schools was regarded as adequate for satisfying the educational needs of the population as a whole. There was no deliberate intention on the part of educators to discriminate between the social classes. They were merely part of a system which was firmly linked to tests of academic aptitude as essential tools of the pedagogical enterprise.

Throughout the fifties, and until the comprehensive school system emerged, British teachers would administer and hand-score examinations in English, mathematics, and academic aptitude, to all primary level students at the age of eleven plus. The composite scores were then used as the basis for recommending students for one of the three types of schools. Even within the schools, homogeneous grouping was frequently practised whereby the students were again sorted into A, B, or C streams.

As a consequence, students from working-class backgrounds were predominantly accommodated in the Secondary Modern institutions whereas Grammar schools catered largely to the children of the middle and upper middle classes. Children of the more affluent segment of British society often attended the public schools which were privately funded and administered. In effect, then, psychometric strategies were unwittingly used as the basis for upholding and reflecting the hierarchical structure and socioeconomic class divisions that constituted British society.

The influx of ethnic minority immigrants from the former British colonies tended to compound the issues even further by adding the factors of race and cultural background. Studies of the assessment and placement of minority immigrant children in Britain reveal that they were disproportionately represented in the vocationally oriented programs. Furthermore, an inordinate segment of those students were often permanently placed in special education classes or schools for the mentally retarded because they did not achieve well on the tests of aptitude and achievement.

It was not until recently that psychologists began to examine the relative structure of IQ tests, and to recognize that the development of learning abilities is related to elements other than inborn ability. It has become increasingly evident that test scores are contaminated by such factors as socioeconomic status, culture and mother tongue. Educators

have come to realize that the traditional tests used to assess student capabilities and learning potential were sadly inadequate to deal with a culturally and linguistically different student population.

Attempts have been made by some to explain the differences in test scores between white and non-white students on the basis of genetic grounds while others have regarded such a discrepancy as being due to long-standing inequities suffered by Third World immigrants and by those who are culturally or linguistically different. But, despite a persistent anti-test sentiment over the past twenty years, and the increasing awareness that when used indiscriminately, standardized tests often create inequities in education, many teachers and psychologists still continue to use them as a means of appraising learning potential including that of culturally different ethnic minority students.

In Canada, problems in assessing and placing minority students have been exacerbated by the large-scale immigrant settlement that began in 1962. The organization of Ontario schools under the Robarts Plan tended to follow the same lines as in Britain. Secondary education was divided into academic, technical, commercial, and occupational programs that, in effect, categorized students according to their scores on tests of academic aptitude and achievement.

Although not so sharply dichotomized as in Great Britain, the Ontario educational system (and particularly the psychometric strategies used to place students) tended to bolster and reflect the social, economic, and occupational class segments of the society. The task of sorting students into programs in schools was made more complex when unprecedented waves of immigrants settled in Ontario - Toronto in particular. Today, about half of the student population of cities comprising metropolitan Toronto comes from homes with a cultural and linguistic milieu that is neither English nor French. The emergence of such a large multiethnic group has created a sizeable and complex problem for the schools to handle.

3. Placement of Minority Students

The problem of placing ethnic minority students is not easily resolved. Where, for example, does a 15-year-old male, newly arrived from Pakistan, fit when he has no credible or reliable school transfer documents, speaks little or no English, and his level of academic achievement cannot be measured by any of the existing batteries of tests? To put him in an elementary school would be disparaging and inappropriate; however, to place him in a class matched to his age also presents obvious problems. Frequently, immigrant students arrive in Ontario schools with handicaps such as sporadic schooling, yet suddenly they must adjust to a new country, learn a new language, deal with what is sometimes perceived as a hostile and unwelcoming environment, and try to fit into a pattern where there are neither models nor peers with which to identify. Based on the research findings of Samuda and

Crawford (1980), 90 per cent of the educators situated in areas of high ethnic concentration tagged assessment of immigrant students to be their major concern.

The answer to the major difficulties in accommodating ethnic minority students in the schools of Ontario is related in several ways to the present organization of schools and the special needs of newly arrived students. For one thing, the educators who run the schools - mainly middle-class Anglophones - are themselves products of a social and pedagogical structure that reflects the values, attitudes, and expectations of the dominant groups of Canadian society. Second, the education that students receive in the schools reinforces the values, language, and socialization patterns of the majority, and bestows social and cultural advantages on the children who belong to this group. Thus, the schools as they exist now favour a definite type of student and tend to alienate others.

For some fortunate individuals, early influences and environmental conditions provide an almost perfect correlation between home and school. These students will have a relatively easy transition to the social and curricular organization of the school. Is it any wonder that they would achieve well? However, for those whose environmental circumstances have been different - socially, economically, linguistically, and/or culturally, there is little accommodation in the traditional school. These students are sometimes labelled disadvantaged, deprived, or handicapped. Such labels can lead to negative and damaging effects for the individuals involved. Frequently, there is a tacit implication of relative and endemic deficiency in those who fail to exhibit standards of behaviour or academic levels of achievement considered normal, especially in the area of literacy.

In researching the practices and consequences of testing in Ontario schools, it was found that the term "special education" had become a catch-all title for a miscellany of programs that cater to students who are intellectually subnormal, physically or psychologically handicapped, or suffering from learning disabilities such as dyslexia. In some school systems, special education represented the administration's attempt to accommodate all students who differ from the norm in one way or another. And, it is into this all-encompassing category that the ethnic minority student who is unable to keep pace with his or her majority counterpart is often placed. This is not to imply that there are no minority students who are truly biologically, physiologically, or neurologically impaired. Unfortunately, the concept of special education classes has become so stigmatizing that parents fear the negative connotations that inevitably accompany such a placement. The belief that "different" means "deficient" is still very prevalent in the placement of minority students in England, as well as in the United States and Canada, although happily it is on the decline.

The need to accommodate ethnic minorities has highlighted the school system's inadequacy in dealing with students who deviate from the accepted cultural norm. Essentially, we are still faced with the task of finding a way to identify an atypical

individual's level of academic potential and performance in order to place him or her in a particular niche within the educational establishment.

In our efforts to cope with this issue, we need to seek solutions for more than the problems of assessment and placement. We must also recognize that the teachers themselves traditionally have been trained in a mode that emphasizes and perpetuates an essentially ethnocentric view of society. Educators, whether they be administrators, counsellors, or teachers expect the student to fit the system, not the other way around.

4. Attitudes of Teachers and Administrators

It is a fact that teachers value the culture of the majority and emphasize the norms that they perceive to be "Canadian". But, seldom have they been provided with the training or professional experience that would encourage, enhance, and optimize a perspective of cultural pluralism for, in many cases, teacher-training institutions persist in perpetuating traditional methods instead of adapting the system to the new realities of the multicultural milieu. How, then, can they be expected to cope with a new student population that requires special pedagogical considerations because of tangible factors such as language and customs, and intangible ones such as motivational patterns, communication modes, and ways of coping with the world?

The study of assessment and placement practices in Ontario (Samuda and Crawford, 1980) revealed the traditional attitudes of large segments of the teaching force. In response to one of the survey questions concerning the placement and treatment of minority students, teachers insisted that they endeavoured to treat them all alike. This meant that the students were given the same treatment, regardless of their ethnicity or individual background. It is sobering to think that such practices have been frequently followed.

Teacher responses to the question of alternative programs and methods for accommodating immigrant minority students yielded revealing insights into the attitudes of teachers. Some felt that school transfer documents should be mandatory for all new students. Others suggested the establishment of transition reception classes for newcomers. A significant proportion of the teachers (21 %) from boards with high ethnic concentration espoused an assimilation program. By contrast, teachers in more heterogeneous regions tended to favour the creation of "holding centres" where the new arrival would have to assimilate before he or she could enter the schools. These teachers often indicated indignation that they and the school system should have to cope with immigrant students. They generally held the view that it was the immigrants' responsibility to adopt Canadian ways and become assimilated as quickly as possible into the majority culture. Such attitudes are clearly at odds with the essence and policy of multiculturalism in Canada.

In response to structured questions, many teachers and administrators recommended the following: 1) more careful screening of immigrants by immigration authorities, 2) mandatory culturalization of children at the preschool level, 3) intensive immersion classes in the English language, 4) more resource staff and teachers, 5) more guidance counsellors, 6) more special education classes, 7) more special education teachers, 8) better-quality testing using local norms and culture-free tests, and 9) testing in the mother tongue. Individual teachers varied in the number of recommendations they made, as well as in the strength of their opinions on one or more of the issues. Generally speaking, educators who worked with many immigrant students showed more sensitivity to their needs and were less unyielding in their opinions that the immigrants should bear the responsibility for assimilation.

When we examine the issues and implications raised by these responses to the problems of testing, counselling, and placing ethnic minority students in Canadian schools, they seem mainly to be:

1. The assumptions underlying an understanding of cultural pluralism in teacher-education.
2. The reliability and validity of existing assessment procedures.
3. Alternative methods of assessing and placing minority students in appropriate programs and in the schools (discussed in chapters 3 and 4).

5. Assessment of Academic Potential

Present assessment and placement procedures are used in an attempt to identify causal factors or the etiology of underachievement in a learner's cognitive processes but such procedures do not take account of the student's background and past experiences. Another problem has to do with the adequacy of the procedures themselves when children from minority backgrounds are involved. Tests are selected and used without a firm theoretical and empirical base, and the results are interpreted as if they contain important clues to educational programming.

A recent Ontario study (MacIntyre, Keeton and Agard, 1980) seriously criticized certain diagnostic tests like the Bender Visual Perception, the Wepman Auditory Discrimination Test, and the Wechsler Intelligence Scale for Children, as inadequate for determining learning disabilities among minority children. Coles (1978) concluded that there was little empirical support for these tests and wondered why they were still being used to study learning disabilities and to categorize students.

Just as there is no one valid psychological test of a learning disability, there is no one test that can be considered culture-free. It is true, however, that standardized tests do predict school achievement, but the results are related to abilities and learning style (skills,

knowledge, and experience), which are developed in the course of academic instruction. Assessment, if it is to be viable, must be related to a prescriptive method and a curriculum program geared to the needs of the individual, especially in the case of students who are culturally different from the mainstream. Herein lies the challenge to today's educators if we believe in the value of building a multicultural society. The incongruity in the use of tests becomes clearer when we examine the history and conceptual framework of intelligence testing.

6. The Concept of Intelligence

The advent of World War I made large-scale testing a reality of civilian life. Due primarily to the pioneer work of Arthur Otis, U.S. Army psychologists developed the tests that came to be known as the Army Alpha and Beta. They comprised essentially multiple-choice standardized items that approximated certain aspects of the original U.S. version of the Binet test developed by Lewis Terman at Stanford University just before World War I began. The timing was most fortuitous since the tests were then administered to over a million soldiers in an attempt to sort and classify them according to intellectual levels and capacities.

By the time World War II began, mass testing had become an established practice everywhere in the United States and was also extensively used in Canada. Standardized group testing became a booming and lucrative business. Used by schools, colleges, and employers, intelligence tests now play a vital part at almost all stages of a person's life. From preschool days through to postgraduate years, they are administered for grouping and course-selection purposes, for placement in special education classes or institutions, for career orientation, for college entrance, and for admission to the various professions. A person's IQ score largely determines the kind of education he or she receives and, ultimately, the kind of position attained in society.

What is an Intelligence Test?

An intelligence test provides, in the form of a symbol such as the IQ, a global, overall estimate of a person's intellectual ability. In the case of the original test developed by Binet and Simon, the score was a relative one expressed in terms of mental age. As Maslow remarked, "it could say only that little Jacques had more intelligence than little Pierre and less intelligence than Anatole" (1944, p. 89). It was Stern who introduced the notion of the *intelligence quotient*, the value produced when a child's mental age (MA) is divided by his or her chronological age (CA).

Tyler compared mental age to "the size of a boy's suit or a girl's dress. We tell people how big Susie is physically when we say that she wears a size 10. We tell them how big she

is mentally when we say that her mental age is 10" (1963, p. 44). The 1960 version of the Stanford-Binet test provided, besides various refinements, a similar computation of the IQ as the one used in group intelligence tests. The IQ is no longer merely a quotient as the name implies but rather a standard score with a mean of 100 and a standard deviation of 15. Therefore, what an individual IQ really tells us is how many standard deviations above or below average a person is. The popularity that the IQ has received over the years is to be deplored, for it was, and still is, frequently misused and its meaning misinterpreted.

The Various Definitions of Intelligence

Intelligence is a concept that has always been a major concern of psychology. Given this importance, it is startling to report that, to date, there is no consensus on the definition of the term. Over the years many definitions have been proposed; so many, in fact, that Spearman (1927) felt that it had become "a mere vocal sound, a word with so many meanings that finally it had none." When, in 1921, the *Journal of Educational Psychology* published a series of articles on intelligence written by prominent psychologists, little agreement could be found among the fourteen distinct definitions that emerged (Tyler, 1969). The same ambiguity that existed over 60 years ago is still apparent today. To illustrate, the following is a list of some of the ways in which intelligence has been defined:

1. The capacity to judge well, to reason well, and to comprehend well (Binet and Simon).
2. The ability to carry on abstract thinking (Terman).
3. The capacity to do well in an intelligence test (Boring).
4. The aggregate or global capacity of the individual to act purposefully, to think rationally, and to deal effectively with the environment (Wechsler).
5. Innate, general, cognitive ability (Burt).
6. The outcome of the interplay of innate potentiality and of such conditions as good emotional adjustment and appropriate educational stimulation (Vernon).

If we examine this list, we notice a number of interesting characteristics. First, most of the definitions try to be all-encompassing and use vague, undefined, even undefinable terms that reveal very little. Second, overemphasis is placed on the ability to reason abstractly. Third, all the definitions tend to regard intelligence as an entity. As Wesman remarked: "We have all too often behaved as though intelligence is a physical substance, like a house or an egg crate composed of rooms or cells; we might better remember that it is no more to be deified than attributes such as beauty or speed or honesty" (1968, p. 267).

Finally, most of the definitions fail to recognize that what is considered an act of intelligent behaviour is inescapably linked to and determined by the values and standards of society.

Intelligence is a culture-bound concept, inseparable from any given setting or environment. For an Australian aborigine, for example, intelligence within the context of the environment could be defined as a composite of the various skills and knowledge of folkways that ensure survival - accuracy in the use of a boomerang, the ability to find water, and so on. Any society with a more naturalistic and primitive mode of life than that found in the industrialized West will place greater emphasis on manual skills than on purely intellectual accomplishments. To say that one society is more intelligent than the other has no meaning, since the valued qualities and requirement for intelligence are different.

Theories of Intelligence

Modern attempts at defining the nature of intelligence can be classified into two categories: the *two-factor* theory and the *multi-factor* theory.

The Two-factor Theory. Briefly stated, the first theory goes back to Galton's distinction between what he called *general ability* and *special abilities* (Burt, 1958, 1968). The distinction was based on the belief that mental tests measure, to some extent, a basic intellectual ability which Spearman later called "g". The more intelligent a person is, the more "g" he or she possesses. Tests of reasoning or tests requiring an individual to establish relationships between things were thought to measure "g" most effectively (Tyler, 1956).

Besides the universal or general capacity, which was believed to be "pure" intelligence, there was a specific factor, "s", for each different minor type of ability. Spearman's followers, Burt and Vernon in England and Humphreys in the United States, devoted much effort to organizing the multiplicity of specific factors discovered by various investigators into a logical system. This then resulted in the hierarchical models of Burt and Vernon, where Spearman's "g" is placed at the top of a pyramid containing various levels of subdivisions (Guilford, 1967, p. 58).

The Multifactor Theory. As the name signifies, this conception of intelligence differs in that it does not link all mental abilities to a common factor. Thurstone, the leading exponent of the theory, claimed that intelligence was multifaceted. He identified eight facets or specific independent abilities, which he called primary mental abilities (PMA), as follows: verbal comprehension, word fluency, number, space, memory, general reasoning, and speed. Thurstone also observed that some degree of intercorrelation exists among the primary abilities, since those who excel at verbal comprehension also tend to evince a facility for word fluency (Linden and Linden, 1968, pp. 71-74).

Espousing Thurstone's approach, Guilford (1967) proposed his now-famous structure of intellect model (SI) in the shape of a cube. The SI model comprises three dimensions:

content (four categories); operations (five categories); and products (six categories). The cube thus contains 120 (4 x 5 x 6) possible cells, each representing a hypothetical mental ability. Guilford claimed that out of the 120 factors, 82 had already been identified.

This brief summary of the two major schools of thought concerning the structure of intelligence is by no means exhaustive, and the reader is advised to consult the references to gain a more comprehensive view of this highly complex subject.

Apart from the theories mentioned above, there are two that suggest new ways to assess minority students. These are Cattell's theory of **fluid and crystallized intelligence** and Sternberg's **componential intelligence** which have not been elaborated upon here since both theoretical formulations are explained in chapter three. W. B. Dockrell, the editor of the 1969 symposium *On Intelligence*, found that "intelligence as a concept is alive and well". Yet, such an assumption is highly debatable in the light of the recent controversy over the relation between race and IQ, which if nothing else uncovered the fallacies in the present IQ tests.

Among the fallacies is the claim that intelligence can be measured by tests when, as we saw earlier, intelligence has not yet been sufficiently defined. At best, traditional IQ tests reflec: the constructor's view of what constitutes intelligent behaviour. Then there is the question not of whether Burt's or Guilford's or Boring's model is the correct one, but whether the concept of intelligence itself is appropriate and useful. That is the purpose of this discourse - to find out how we can use assessment to improve the education of minority students. As Guilford states, in defending the utility of the notion:

> The term 'intelligence' is useful, nonetheless. But it should be used in a semi-popular, technological sense. It is convenient to have such a term even though it is one of the many rather shifty concepts we have in applied psychology. It would be very desirable, for purposes of communication and understanding, to specify a number of intelligences -- intelligence A, intelligence B and so on (1956, p. 290).

7. Reliability

The publishers of educational and psychological tests invariably provide detailed manuals and technical data on the administration and interpretation of the tests they market. Those teachers, counsellors, and administrators who are responsible for selecting and using standardized measures are cautioned to use the utmost judiciousness when selecting tests and interpreting scores in connection with ethnic minority groups. Fishman and his associates contend that responsible educational authorities should recognize that placing tests in the hands of unskilled personnel is as unwise as allowing cars or other highly technical and

powerful tools to be handled without proper training and guidance. They too advise extreme caution when tests are administered to members of minority groups (1964, p.130).

Reliability has been defined as "the consistency of scores obtained by the same individuals when re-examined with the same test on different occasions, or with different sets of equivalent items, or under other variable examining conditions" (Anastasi, 1968, p.71). If Mary scores 116 points on an intelligence test on one occasion, and 84 points on the same test administered under the same conditions two weeks later, then the test reliability is highly suspect. No test can be perfectly reliable since psychological measurements, like physical measurements, are affected by a number of sources of variance or error. Among these sources are trait instability, sampling error, administrator error, scoring error, health, motivation, degree of fatigue and luck in guessing. Thus, the reliability of a test must be indicated so that users are aware of the degree to which it will be accurate. A measure of reliability is expressed in the form of a coefficient ranging from 0 to 1.0, with the most typical values falling somewhere between 0.85 and 0.90.

In addition to sources of error, various factors are known to influence the reliability of a test. Durost and Prescott (1962) categorized these factors according to their effect on the different types of reliability coefficients. Test length (the fewer the items, the lower the reliability), item difficulty, group heterogeneity (the more heterogeneous the group, the higher the reliability), and most important for the purposes of this discussion, spread of scores, all these affect a test's reliability.

While the range of ethnic minority test scores are spread across the entire distribution, they tend to cluster at the lower end of the scale. Wesman (1952) has demonstrated that the narrower the range of scores, the lower the coefficient of reliability. He concluded that:

> A test may discriminate with satisfactory precision among students with wide ranges of talent but not discriminate equally well in a narrow range of talent. A yardstick is unsatisfactory if we must differentiate objects varying in length from 35,994 inches to 36,008 inches ... It should be noted, then, that no reliability coefficient can be properly interpreted without information as to the spread of ability in the group on which it is based (in Gronlund, 1968, p.197).

Minority students, then, are consistently assessed by tests that do not indicate the value of the reliability coefficient for their group. The tests only indicate how reliable they are according to sample groups upon which reliability was first established. As a result, for groups that differ from the sample group the actual effectiveness of a test "will tend to be lower than the reported reliability coefficient appears to promise" (Fishman et al, 1964, p.131).

The inference is that high reliability coefficients are only high for the reference group and those that approximate it. The coefficients will tend to be much lower for groups

that are more homogeneous and have a smaller range of talent than the reference group. Moreover, the wise and informed test user will realize that high reliability does not guarantee validity of the measures for the purpose in hand, but low reliability may destroy validity (Fishman, et al., 1964, p.133).

8. Validity

Validity has always been recognized as an essential and indispensable characteristic of a test but the concept has suffered from a lack, or more precisely, from an abundance of definitions (Ebel, 1961). The question of definition was addressed by a joint committee involving the American Psychological Association, the American Educational Research Association, and the National Council on Measurement and Education. The resulting guidelines, established first in 1954, and then extended in 1973, were called the *Standards for Development and Use of Educational and Psychological Tests.*

The validity of a test may be defined as "the degree to which the test is capable of achieving certain aims" (French and Michael, in Gronlund, 1968, p.166). Thus, if one of these aims is to measure Jane's ability to spell, the test she is given must have good *content validity.* If another aim is to establish her chance of entering a university, the test must have good *predictive validity.* Similarly, if a characteristic such as creativity is to be measured, the test must have good *construct validity.*

Content Validity. The significance of the ingredient of validity in the determination of the test performance of minority students cannot be overemphasized. Content validity is demonstrated by the degree to which the content of the test samples the class of situations or subject-matter about which conclusions are to be drawn. Thus a test has good content validity if its items relate well to the particular objectives to be assessed.

The appropriateness of a test item can only be determined by careful and critical examination. Two major assumptions are made in the validation procedure with respect to scholastic aptitude or mental ability, namely: 1) that test takers have been exposed to and are familiar with the universe of information from which test items are drawn; 2) that the language of the test is the language of the test takers.

In the case of the Stanford-Binet test, students are asked to identify 'common objects' presented in the form of pictures or toy models, to explain why certain objects are employed in daily living, and to interpret pictorially presented situations. However, while common objects such as books, periodicals, and art objects used by the Stanford-Binet may certainly be familiar to children from middle-class families of the Canadian macroculture, they may be almost completely unknown to less advantaged children.

A student whose life experiences stem from a minority ghetto may be unable to respond when asked: "Why do we have books?" Such a question may have no relevance in

his or her daily life. Many common words in the English language have very different meanings for students from that milieu than they have for middle-class Anglophone children. Klineberg (1935) reported that when West Virginia rural blacks were asked to give the opposite of a word, they did not answer because they did not know the meaning of "opposite". He remarked that if these people "were required to take the Otis test as a written examination, in the usual manner, they would naturally make a zero score on all the 'opposite' items" (p.169).

Furthermore, in the Stanford-Binet and many standardized group intelligence tests, strong emphasis is placed on the definition of abstract words, on sentence completion, on analogies, and so on, all of which presuppose a certain mastery of the comprehension and usage of standard English. Many instances have been reported in which the speaker of a black vernacular or dialect gave "nonsensical" answers to test questions because he or she did not understand what was required or was unfamiliar with the examiner's pronunciation.

Criterion-Related Validity. This type of validity "is demonstrated by comparing the test scores with one or more external variables considered to provide a direct measurement of the characteristic or behaviour in question" (French and Michael, in Gronlund, 1968, p. 167). Criterion-related validity is generally predictive in nature. For instance, in intelligence tests, academic achievement is the criterion against which IQ scores are validated: it is predicted that a high IQ forecasts success in school, while a low score indicates a relatively low chance of success. The degree to which intelligence tests have good predictive validity, however, depends upon the degree to which both the criterion and test scores are devoid of contaminants. Fishman and his associates (1964) identified three categories of factors that can impair a test's predictive validity with respect to minority students.

The first category concerns those factors that can directly influence test scores. The literature abounds in studies that have demonstrated how external variables such as nutrition, anxiety, and motivation can affect the performance on tests that supposedly measure intellectual functioning. Whereas, as early as 1935, Klineberg illustrated that speed of performance directly affects test scores, he specifically proceeded to show that speed, upon which the large majority of tests depend in more or less pronounced degrees, is basically a culturally oriented concept. He states:

> The attitude toward speed varies greatly in different cultures and not all people will work on the tests with equal interest in getting them done in the shortest time possible. Peterson and his associates (1925) have noted this relative indifference to speed among Negroes and the writer found that the injunction to 'do this as quickly as you can' seemed to make no impression whatsoever on the American Indian children on the Yakima reservation in the state of Washington (1935, p. 159).

Scores have been shown to increase when good rapport exists between the examiner and examinee. In the case of minority children, the race of the examiner greatly influences their performance, especially when they are being tested for "intelligence". Likewise, familiarity with testing procedures, the testing centre, the test format, test instruction, and test-taking skills also affect the results to a certain extent.

The second category of factors relates to the criterion itself - the school grade. Do grades really represent a true and accurate measure of a child's (particularly a minority child's) scholastic aptitude? Or are they subject to the influence of other variables that are unrelated to academic success? It was found that "grades are likely to reflect motivation, classroom behaviour, personal appearance, and study habits, as well as intelligence and achievement" (Fishman et al, 1964, p. 136).

The third category consists of such variables as the teacher's knowledge of the child's IQ score, financial status of the family, area of residence, number of siblings, and so on; these contribute considerably to the formation of stereotyped notions about a given individual's expected performance in school, his or her potential to achieve, and the way in which he or she is rated. Despite the criticisms of the Rosenthal and Jacobson (1968) study, there is a widespread belief that teachers' expectations not only colour their judgements of their students but also influence the students' own perceptions of themselves, their levels of aspiration, and their achievements.

Finally, criterion validity may be lowered whenever the period between the administration of the test and the obtainment of the criterion measure is lengthy. Fishman and his associates state:

> An illness, an inspiring teacher, a shift in aspiration level or in direction of interest, remedial training, an economic misfortune, an emotional crisis, a growth spurt or retrogression in the abilities sampled by the test -- any of these changes intervening between the testing and the points of criterion assessment may decrease the predictive power of the test (1964, pp. 136-137).

Construct Validity. This type of validity "is evaluated by investigating what qualities a test measures, that is, by determining the degree to which certain explanatory concepts or constructs account for performance on the test" (French and Michael, in Gronlund, 1968, p. 167). Essentially, studies of construct validity check on the theory underlying the test.

Traits such as intelligence, motivation, interest, and creativity are not observable, and thus cannot be measured directly. In order to obtain information as to whether individuals possess a certain trait, it is essential to build a theory specifying its characteristics. Generally, it is hypothesized that those who possess a particular construct, such as intelligence, behave differently from those who do not. By observing the two extremes - an

extremely intelligent person and an extremely stupid one - a list of differentiating characteristics can be established.

Maslow has provided an extensive picture of model behaviours. Generally speaking, "an extremely intelligent man, when compared with an extremely stupid man, solves his problems, intellectual and personal, more rapidly; he behaves generally in a manner that we call more efficient, more functional, more intelligent" (Maslow, 1944, p. 85). Thus, a theory is built specifying how intelligent people behave, and individuals are classified accordingly.

As demonstrated from the discussion contained in the various sections above, the problems of the fair assessment and placement of minority students are not easily resolved. If significant change is to occur in the selection and use of standardized tests, and especially in the consequences that flow from them, teachers, administrators, and counsellors must become aware of the implications. Change can be best achieved through sensitivity and awareness of the problems and issues, knowledge of the facts as they exist today, followed by the development of programs and the honing of skills to meet the demands of the new demographic realities of Ontario. The following chapter is intended to establish the facts as they exist in the province by focusing specifically on research data and the implications that stem from the assessment and placement practices in Ontario schools.

II. Focus on Ontario

The challenge of implementing multiculturalism into fair and effective educational policies and practice remains one of the most critical undertakings of the 1980s. In responding to the demands of a more diverse population and the political confrontation of Quebec and powerful ethnic minority groups, the policy of multiculturalism was introduced to replace the former assimilationist tradition of Canadian society. But it also signalled a need to reshape educational policy and practice to fit the realities of ethnic, cultural, and linguistic diversity in the schools. In effect, the Ontario educational system that once stressed assimilation and cultural dominance has been undergoing modifications to make it more responsive to the needs of ethnic minority populations.

In Ontario, the adoption of an active multicultural policy has real significance. This province has a large immigrant population which has arrived mainly within the last two decades and has settled in urban areas where the presence of large industrial and commercial enterprises offers good employment opportunities. As a result, by 1971, almost half of the population of Toronto had been born outside of Canada and in other cities, such as Hamilton, Oshawa and Ottawa, high percentages of foreign-born residents were also noted. The effect that this rapid, large-scale development has had, and still is having on Canadian society cannot be reflected by mere numbers for immigration introduces variables not only of culture and language, but of colour and other physical features.

The changing population necessitated an adjustment of the traditional values and methods of the educational system. For Ontario, cultural diversity and multiculturalism went beyond principle and policy; they were part of the new demographic and political realities of the seventies and eighties. No one can escape the fact that the province has progressively become a *de facto* multicultural society.

As stated earlier in chapter 1, Ontario's policy for multiculturalism was first enunciated in three fundamental objectives: 1) equality of opportunity; 2) access and participation in the social, economic, and political structures; and 3) cultural retention and sharing. How are these objectives reflected in the province's current educational policy and practice? What problems exist in transforming the policy into reality? What considerations are being taken into account regarding the assessment and placement of minority students in particular?

1. Research Findings

This chapter provides some of those answers by reviewing the results of the original provincial study that focused on the reception, assessment, counselling, and accommodation of minority students in the schools of Ontario.

How are the Schools Responding?

The study conducted by Samuda and Crawford (1980) and sponsored by the Ontario Ministry of Education represents the first attempt to make a comprehensive survey of how teachers, administrators, and counsellors across Ontario were responding to the new challenge of cultural diversity in the schools. The inquiry was conducted in 34 school jurisdictions, including 245 elementary and secondary schools in both separate and public systems. Almost half (48 %) of the schools were situated in metropolitan Toronto. The sample was chosen in such a way as to include schools with significant populations of new Canadian students belonging to the most recent immigrant groups to Ontario, namely, East Indians, Pakistanis, Portuguese, and West Indians.

In this study, principals and board officials were asked what they thought was the most difficult aspect of student placement. Their most common response was that of assessing students appropriately, particularly in the age group of 11 to 15 years. The focus of their concerns was expressed in such questions as: What is the best way to determine the students' level of functioning? Should we pay more attention to students' social development or their academic development? How do we distinguish between a language problem and a learning problem? How do we know if a particular assessment is accurate?

It is not easy to bridge the gap between the expectations of Canadian schools and the experience of immigrant minority students. Respondents (especially those practising in schools with high ethnic concentrations) tagged the process of assessment as a major problem and indicated that it was further complicated by the lack of suitable academic records for many of the new Canadian students. In categorizing areas of difficulty, they listed: a) diagnostic assessment; b) the background of immigrant students; c) the students' home language; and d) the students' learning style and adjustment in school.

With regard to the first area of difficulty, diagnostic assessment, significant differences between the immigrant students and the population on which standardized test norms are based render such tests invalid (Mercer, 1971; Samuda, 1975). As a result, alternative methods for evaluating the ability of students from non-mainstream backgrounds must be found. Furthermore, most school psychologists and guidance counsellors have been trained in traditional methods of assessment; therefore, lacking the training and the resources, the boards face a real dilemma in their attempts to meet the needs of the new Canadian students.

The situation is further complicated when students have incomplete or no formal written academic history, for Canadian schools rely heavily on such records to make assessments. The training of teachers also often leaves them ill-equipped to operate effectively in a cross-cultural context, even when language is not a barrier. Thus, few of them can draw from their students the pertinent information upon which an accurate assessment can be based. This, then, constitutes the second area of concern.

The third problem, language, is critical. In the first place, lack of a basic competence in the understanding and use of English puts an obvious constraint on the selection and use of standardized tests. In addition, the inability to speak and understand the language places a serious barrier for communication between student and teacher. Within the context of the traditional school, the administration is therefore faced with a real predicament in trying to solve the problem of appropriate placement of the immigrant minority student who speaks a different language or dialect.

The fourth area of difficulty, learning style and personal adjustment, is very much rooted in the student's home culture and the quality of his or her initial interaction with peers and society at large. Cultural background has been demonstrated as having an enormous impact on an individual's cognitive style (Berry, 1976). Learning styles that may be appropriate in the home culture may prove to be inapplicable in the new school environment (Das, 1973). Thus, qualitative differences between a student's learning style and the mode of instruction can heighten his or her feelings of disorientation and consequently impair academic performance.

The scope of subtle behavioural contaminants increasing the difficulty of making a fair assessment becomes clear when one considers the range of the changes that the immigrant student faces within the classroom. Danziger (1971) noted that among the Italian immigrant students he observed, there was a significant correlation between low motivation to achieve academically and low levels of self-esteem. Similarly, Beserve (1973) and Anderson and Grant (1975) found a connection between the adjustment problems experienced by West Indian students and their difficulties with school work. All this suggests that Canadian schools face a serious challenge and must make substantial modifications in their assessment and placement procedures if they are to accommodate the exceptional circumstances presented by students from diverse cultures.

Assessment Practice

The information gathered in the Samuda and Crawford study provides the basis for an overview of some significant trends and implications for the future. What follows is a point-by-point summary of the main findings:

1. The survey showed that, in general, tests were used to a relatively limited extent as part of the initial placement process; only 29 per cent of all the boards surveyed reported using them. Boards with a small ethnic population used tests far more frequently than those with medium or large numbers of minority students. Boards in the areas of highest ethnic concentration indicated that they were not in favour of intelligence testing for students who had been in Canada less than two years.

2. Assessment of a new student involved evaluating his or her academic records, interviewing the parents, and acquiring basic personal and demographic information, such as age, country of origin, etc.

3. When sufficient documentary evidence was not available, the tendency was to rely heavily on data gathered through the interview, and supplemented to some extent by standardized or teacher-made tests in mathematics and English. This was generally necessary with immigrants since Canadian-born students usually have detailed records from their previous schools. The children would then be placed in a class and their progress monitored by the classroom teacher. The large boards in metropolitan Toronto often have professional personnel such as social workers, community liaison officers, and psychololgists to help with assessment and placement decisions.

4. Low academic achievement and difficulty with English were reported as the main criteria for deciding whether or not a student's initial placement should be reviewed. The researchers were not able to gather data on how frequently initial placements were actually changed.

5. Tests appeared to be used much more frequently during the review process than during the initial placement. Teacher-made tests were among the most frequently used.

6. The majority of school boards (80 %) reported modifying tests for immigrant students. Much lower levels of modification were reported by individual schools. Most modifications were minor rather than major; they consisted of time extensions, item deletions, and word substitutions. In general, there seemed to be a preference for leaving standardized tests intact, but allowing for freer interpretations of the results.

Placement Practice

One of the prime objectives of the Samuda and Crawford study was specifically geared to investigate the ways in which immigrant minority students were being placed in the schools across the province. To what extent were the schools adapting to the needs of minority students? Were the programs and methods structured differently to cater to the changing demographic reality? What was the role of the administration, the guidance counsellor, and the classroom teacher in the making of placement decisions? These were some of the questions that the study sought to address. The findings are summarized below:

1. Typically, most students are placed in their appropriate grade level according to age.

2. Where it was considered inappropriate to place the student according to age, special placement arrangements are made. Almost all respondents reported having special programs for alternative placement.

3. Three kinds of special placements were judged to be the most relevant to immigrant minorities. They were: English-as-a-Second-Language or Dialect programs, academic upgrading programs, and remedial programs. These three types were also reported to be the most frequent special placements in schools.

4. The highest priority appeared to be given to ESL/D programs deemed the most needed and many respondents indicated that such programs were being developed. There was also a high demand for new orientation programs.

5. There was a greater demand for new special programs in schools outside of metropolitan Toronto than inside it.

Certain general impressions that were gained from the study merit some elaboration at this point. First, it was apparent that few school boards had well-articulated policies with respect to the reception, assessment, and placement of ethnic minority students. Those who did were confined to jurisdictions in metropolitan Toronto; thus suggesting that the school boards serving the areas of highest ethnic minority concentration in Ontario were responding in greater measure to the problems of new Canadian students. Second, there seemed to be little recognition of the need for special education programs for minority group students, except ESL/D programs. Third, ESL/D programs were often lumped together with other special education programs, such as services for the learning-handicapped, with which they

were not compatible. Fourth, the level of ethnic concentration appeared to be the most critical factor in effecting change in individual school systems.

The Role of the Classroom Teacher

An additional trend worth noting was the major role that the classroom teacher played in the assessment process, particularly in terms of interviewing and orienting new students, monitoring their progress after initial placement, identifying them for referral, and preparing and administering tests. These responsibilities raise the important question of whether teachers have the experiential background and training necessary to carry out these tasks competently.

The Role of the Counsellor

Another troubling finding was the little importance and attention given by the school administrators to counselling. In 128 interviews on this subject, only one respondent made a specific reference to the involvement of guidance and counselling in assessment, and no procedural protocol seemed to exist for guidance teachers and counsellors to participate directly. Only a few metropolitan Toronto schools with heavy ethnic concentrations required guidance personnel to be involved in assessment and placement processes. Moreover, there were sometimes marked discrepancies between the responses on this issue given by board officials and those given by schools principals, indicating a gap between board policy and school practice. These discrepancies were evident in larger city school systems. The researchers concluded that guidance function was underused in most schools and would have to be given more attention as a means of helping minority students adapt to Canadian schools.

The Role of the School Boards

There is, of course, an inevitable time lag between the announcement of a given policy and its implementation in the locus of change. With regard to multiculturalism and education, another explanation for the time lag might be found in the manner in which innovations generally have been initiated within Toronto school boards; that is, from the top - the "top" being the board of trustees - the ultimate policy maker (Murray, 1977). The politicians who often sit on such boards appear to be more sensitive to the concerns (with their possible political consequences) of their ethnic minority constituents. But, teachers, on the other hand, are less prepared to initiate and promote change in the education system, which may partially be due to their training and professional experiences, and to being overwhelmed by the rapidity of the changes occurring. The closer correlation between board and school responses in non-Toronto areas suggests that where few significant innovations were being initiated, there is likely to be a far greater congruence between policy and practice.

2. Implications for Change

Looking ahead, there seems little reason to expect substantial change or modification in the approach to student assessment and placement in areas outside of metropolitan Toronto. Change in these jurisdictions is likely to be limited to the implementation of ESL programs and to some increases in personnel resources for remedial instruction and special education. In addition, since survey respondents expressed a relatively high concern for orientation programs, and frequently suggested community liaison and staff sensitization as ways to accommodate ethnic minority students, it is reasonable to anticipate some positive action in these areas.

Resistance to Multicultural Policies

In ideological terms, the assimilationist attitude reigned among teachers and school administrators. Even respondents in Toronto schools used expressions such as "provide a holding centre", "culturalize the students", "provide a crash course in Canadian customs", and "give students one year to adjust to Ontario culture", etc. when discussing how to accommodate new immigrants.

Such attitudes, even among relatively enlightened educators, seem to indicate that multicultural policy will likely encounter a substantial degree of resistance from schools for some time to come. This prediction is supported by Murray's (1977) findings on the attitudes of professionals in the Toronto school system. He found that while there apparently was a good deal of support for the multicultural policy from board members, individual respondents indicated that certain segments of the school system and community were against or did not favour multicultural considerations in assessment and programming.

Central to the spirit of multiculturalism is the principle of *equality*. The concept of equality in education is not easy to understand and still less easy to put into practice. Among the misconceptions that exist is the assumption that equality of educational opportunities means that the same treatment should be given to all students. The phrase "We treat them all alike" is often used as a defence against possible accusations of discrimination. There appears to be little appreciation among educators of important aspects of differential psychology that relate to education in cross-cultural contexts.

The question that now arises is whether Ontario schools will continue to maintain the social and economic interests of one particular group, as they have done in the past (Porter, 1965), or whether they can help generate changes in accordance with the realities of a new population. At present, immigrant students are being assessed and placed in accordance with procedures and standards established for average students from the mainstream of society. The outcome of this treatment is that their adjustment to their new

country is often negatively affected, which can blight both their educational and career opportunities. If the problems of assessment and placement earlier discussed are to be satisfactorily resolved, schools must move from merely a reactionary stance on multiculturalism to a position of positive commitment.

Changes Needed in Teacher Education

Before this can occur, teachers and administrators must receive the kind of preparation and training that will enable them to become effective agents for change. First of all, they both need to have a clearer understanding of the basic goals of the government's multicultural policy. They also need to know what this policy means in terms of educational goals and practice. While there are some published statements on educational policy and curriculum guidelines, it seems that much more discussion and exploration of this issue are needed. Second, present efforts in in-service education need to be expanded.

Fortunately, there is increasing recognition of the need for system sensitization. The nature of this sensitization has already been given serious thought by a number of educators. It should be stressed, however, that teacher involvement should be universal rather than selective. To argue that teachers who have certain specializations, or who intend to teach in certain areas, will never interact with children from a variety of backgrounds, is to miss the point; teachers need to prepare themselves and their students for life in a multiethnic, multiracial society (Mallea and Young, 1978).

The research study found that many principals hold the view that to recognize openly the ethnic mix in a school is tantamount to discrimination. Yet, how can a school begin to attend to the special or different needs of its pupils if cultural differences are not acknowledged? The paradox of educational equality is that in a multicultural school population, it is sometimes necessary to treat students differently in order to ensure equal opportunity. To attain this goal might well mean, for example, that an unequal allocation of physical and personnel resources must be provided to minority students in order to accommodate for their greater needs.

3. Perspectives on Multicultural Education

What, exactly, constitutes multicultural education in Ontario? Our review of the literature provided a useful framework for discussions on this somewhat complex issue. There appear to be four different approaches, each of which has different objectives and implications for practice. These are: 1) education of the culturally different; 2) education about cultural differences; 3) education for cultural pluralism; and 4) bicultural education. We believe that all of these approaches interact to make up the character of our educational enterprise. However, care must always be exercised to avoid perpetuating the status quo at

the expense of alleviating deeply rooted problems. For example, most of the recent measures taken to improve assessment and placement procedures, are aimed at compensating for cultural differences, rather than at altering existing conditions. These present conditions are based on the assumption that immigrants to Canada desire (or should desire) to assimilate into the mainstream socioeconomic structure. The improvements are intended to provide equality of opportunity to compete in a middle-class-oriented culture.

In addition to properly assessing students and placing them in appropriate levels for transition, we need to foster a healthy learning environment by educating people about cultural differences. By focusing on the diverse riches of a multicultural society, teachers can guide all students to appreciate one another's background. If an atmosphere of acceptance and respect can be generated this would help to prevent potential feelings of alienation and anxiety among minority students, and to encourage their development of a positive self-concept and a confidence to learn.

It has been argued (Baum, 1978) that education about cultural differences might lead to greater, instead of lesser, social fragmentation, possibly resulting in negative political implications for Canada. However, such a risk, if it exists, is more related to the issues of heritage language instruction and improved social studies content than to the provision of equal opportunities by fair student assessment and placement. On the positive side, if equal educational opportunity becomes a reality, then most Canadian children will grow up capable of integrating the diverse cultural elements in the milieu. That is what multiculturalism strives for.

The Role of Parents and the Community

Many immigrants likely experience a state of mind described as "anomie", a lack of certainty about norms and values, and a feeling that the rules that formerly guided conduct have lost their force and legitimacy. Differences in cultural background, family lifestyles, and language make it difficult for school officials concerned about the welfare of immigrant students to establish contact with the parents to inform them of community resources, including education services for themselves as well as their children. Elliston (1984) sees a vital need to encourage the involvement of individuals and groups of parents in opportunities to engage in their own informal education and in gaining a better understanding of the education process of their children. Successful adaptation to the demands of their changed conditions of life requires new learning activities.

What becomes necessary then is the creation of a community of shared experiences, referred to by Bloom (1971) as "cooperative and enabling modes of intervention". The community as a whole must be encouraged to welcome newcomers and to recognize their presence as a positive contribution to its well-being. This is possible only when cultural

differences are perceived in a positive way and when there is an attitude of accommodation (Scarborough Board of Education, 1977).

Community awareness and parental involvement in programs for newcomers can be extremely important in promoting reciprocal learning and in paving the way for adaptation and change. In order to foster a relationship between the school and the community, it is necessary to take education into the community, and to bring the community into the school. This scheme could aid both parties in their task of socialization when cultural discontinuity and/or disrupted educational experience are the intervening variables (Elliston, 1976).

Maintaining a democracy requires much effort and sensitivity by all its citizens. The fulfillment of multiculturalism demands that people exercise compassion, fairness, and vision in order to build a society marked by diversity and unity. Jaenen's (1973) comments provide a clear guide to all educators who feel a responsibility to initiate and promote positive changes in this direction:

> Democracy involves choices; selection requires reasonable alternatives. Therefore, when uniformity is demanded in the guise of unity the democratic structure is endangered because uniformity tends to destroy the self-renewing principles of alternatives, of free choice, of the right to change one's mind.

III. Innovative Approaches in Assessment

Psychologists who deliver services in a multicultural society must decide which aspects of a particular problem are unique to a specific group, which cut across cultural differences, and which are common to all individuals. The same problem faces educators when assessing the intelligence of students of varied backgrounds.

Traditionally, the assessment of cognitive ability began with the assumption that it is static and unchanged by teaching and learning. Although the concept of mental ability as innate has helped us to understand some aspects of human intelligence, it does not adequately explain what intelligence is, nor how it functions. In fact, static appraisal techniques have been found to be inadequate under special circumstances, such as when they are applied to the assessment of the mentally retarded (Haywood et al., 1975) and culturally different minority groups (Budoff, 1974; Feuerstein, 1979). The discovery of these inadequacies has prompted experts to suggest some alternative approaches (Samuda, 1975; Mercer, 1979).

The concept of intelligence has been the subject of intensive examination. While some psychologists believe that it can be represented by a single number or factor, others (Sternberg, 1977; Detterman and Sternberg, 1982; Carroll, 1983) contend that tests based on a single factor or even multiple factors cannot account for all the variance of mental ability between individuals. Factor analytic studies of intelligence have been useful in identifying the number of specific abilities that make up an overall mental ability, but they fall short in explaining how a specific ability or cluster of abilities develops. Mental tests would be far more useful if, in addition to measuring intelligence as a product, they also could identify the **process** by which intelligence changes and/or accumulates as an individual acquires new experiences. Cattell's theory of fluid and crystallized intelligence, described below, seems to address some of these concerns.

1. Cattell's Theory of Intelligence

According to Cattell, **fluid intelligence** refers to a basic capacity to adapt to new situations. It is also an inherent capacity for learning and problem solving that is independent of both education and cultural influences. In order to adapt to novel situations, fluid intelligence must encompass flexible inductive skills. **Crystallized intelligence** emerges from a person's use of fluid intelligence to interact with society. It is therefore, a product of formal education. The way crystallized intelligence organizes knowledge and concepts reflects how the member of a given society processes information and solves problems.

Because these abilities are already developed they can be quantified and assembled to make up tests for general mental ability. The outcome of such measures is necessarily static in nature.

Intelligence in Cattell's conception, then, emerges from an active mind that is malleable and responsive to instruction. Intelligence not only processes information, but also anticipates new situations and plans effective solutions. It follows that any adequate assessment of intelligence as described by Cattell must address both these fluid and crystallized characteristics.

2. Sternberg's Componential Theory

Sternberg (1977, 1981) divides intelligence into five components that function together to help people handle problems. A "component" is a basic elementary process that operates upon an internal representation of objects and symbols. These five components are: metacomponents, performance components, acquisition components, retention components and transfer components.

Metacomponents are mental mechanisms people use to select and coordinate the problem solution. Like a switchboard, they match strategies with tasks. Sternberg's research shows that planning is an important part in the performance of any task: good test-takers, for example, spend more time studying questions before working them out than their less able counterparts. In essence, metacomponents may be compared to Cattell's fluid intelligence, Brown and Campione's (1982) executive functions, and Flavell's (1977) meta cognitive processes. In each case, the ability in question is the ability to monitor the full range of memory, comprehension and other cognitive functions.

Performance components of intelligence are responsible for encoding information relevant to the solving of problems. In so doing, they rely on metacomponents that first determine the degree of similarity and dissimilarity between two or more stimuli, infer the relationship between them, and decide what needs to be done as an appropriate response. **Acquisition components** help people learn new information, while **retention components** store it. Finally, **transfer components** are responsible for transferring the acquired information to appropriate problem situations. All five components of intelligence interrelate to function as a whole, although it is possible to identify different sequences in which they function as an individual responds to a particular problem or situation.

Sternberg has identified two ways in which people process information ("do analysis", as he puts it), when they solve problems in mental ability tests. He called these the **cognitive correlates** approach and the **cognitive component** approach. Each of these approaches handles a range of tasks commonly found in mental ability tests. Sternberg hopes that by understanding how people solve various types of problems, we can design mental tests that

reflect a wider range of abilities as well as show how specific abilities function. He believes that intelligent people not only solve new problems quickly, but also train themselves to solve familiar problems by rote so that the same mental process does not have to be enacted every time they are confronted with a particular task.

In the cognitive correlates approach, the testee responds to a test item or task by identifying its encoding and perceptual characteristics, and then solves it by matching it with appropriate information that is available. The characteristic factor in this approach is that one breaks the task down into smaller components to facilitate understanding. By doing so, one can plan a working strategy for a solution that will involve specific step-by-step operations. The cognitive component approach is most effective for tasks that involve inductive reasoning, such as analogies, matrix perception, and scenes completion.

Induction is a skill whereby one induces a rule governing the functioning of a set of elements of a phenomenon. For example, in working out a problem in figural analogies, one must identify the common components, make comparisons between patterns, and find out the rule for figural transformations. The level of sophistication in reasoning that depends first on the level of task complexity, and then on the extent to which the individual has ready strategies to identify the various transformations in the analogy. A person who knows the components modes of an analogy, for example, can infer the rule that changes A to B without too much difficulty.

Verbal analogies provide excellent opportunities for observing how different individuals approach various problem situations, reflecting the flexibility or plasticity of cognitive structures. Flexibility of cognitive structure means the ease with which one can shift procedures whenever one finds the strategy that one is using no longer feasible. Unlike figural analogies, which follow the linear transformation pattern of A : B : C, verbal analogies often follow alternate transformation patterns such as A : B, C : D, etc. To deal with such patterns, it is necessary to acquire and memorize a good number of transformational models in order to make procedural shifts. Observing how low performers and high performers approach verbal analogies makes it possible to determine their relative knowledge bases, as well as the procedural flexibility with which they solve problems.

The data gathered from such observation provide insights into new dimensions of human intelligence. Some of the evidence suggest that components are involved in the function of intelligence, each of which deals with a specific task. These components are: encoding, inference, rule generation, memory, discrimination, procedural knowledge, comparative skills, executive processes, and conceptual knowledge. Working as a whole, these components generate a dynamic capacity capable of solving problems that human beings encounter.

With this view of intelligence in mind, psychologists have set out to devise new approaches to intellectual assessment that take into account not only static knowledge but also cognitive processes. While these approaches still depend on the use of tests and test scores as a measure of mental ability, they also incorporate teaching and clinical observation to determine the individual cognitive style and possible learning deficits of any one student. Such assessment, therefore, is an ongoing process in which the teacher monitors and reinforces academic progress and cognitive development. Many studies have advocated the need to shift from conventional methods of assessing minority students to these new approaches (Salvia and Ysseldyke, 1978; Garcia, 1981; Reschly, 1981; Scarr, 1981; MacIntyre, 1985). Two of the most vital approaches are discussed below: *comprehensive individual assessment* and *dynamic assessment*.

3. Comprehensive Assessment

The goal of comprehensive assessment is to enhance the accuracy in evaluating the current level and mode of intellectual functioning of a student within the context of his or her cultural and experiential background. Specific learning needs are diagnosed and assets are identified to help the teacher formulate a personalized remedial program. In practice, such an assessment process involves a team consisting of a counsellor or psychometrician, a teacher, and a school administrator in the process of gathering data through testing, observation, consultation, and diagnosis. Often parents are invited to participate. The assessment follows these guidelines:

1. Diagnostic decisions, placement, and program changes in any counselling situation should be based on a wide range of information about the student.

2. Assessment should result from a team deliberation on such information as how the student's performance is influenced by acculturation, language skills, behaviour mode, socioeconomic background and ethnocultural identity.

3. The appraisal of the student's needs, strengths, weaknesses, and level of present cognitive functioning should be made with reference to the background data outlined in point 2.

4. The main assessment objective should be to define and design a teaching or remedial program that would best help the student profit from the school system.

5. The remedial program should be carried out and monitored regularly by the assessment team.

The information generated by a process following these guidelines is called a comprehensive profile. In contrast to a single score, as obtained from a conventional IQ test, the comprehensive profile is made up of information from a wide range of data sources, namely: observational data, school records and other available documents, language dominance, educational assessment, sensorimotor and/or developmental data, adaptive behaviour data, medical records, and personality assessment (including self-report). Intellectual assessment should be performed last, so that its result can be interpreted in the context of all the other information gathered. The works of Sattler (1974), Salvia and Ysseldyke (1978), and Chodzinski and Samuda (1985) provide many valuable suggestions on how to collect, validate, and interpret many tests and background information for cross-cultural assessment.

Comprehensive assessment is a continuous process. As individuals develop, their intellectual and achievement profiles change. Identifying a student's information processing modes and other relevant factors for each subject area would help teachers design appropriate learning materials and procedures to meet that individual's needs. The emphasis should be on helping students maximize competencies and opportunities, particularly in the case of minorities (Reschly, 1981). With this in mind, Harold Dent (1976) has suggested that assessment procedures should follow four directives. First, the assessment must provide an accurate appraisal of a student's current level and mode of functioning within the context of his or her cultural background and experience. Second, it must identify specific educational needs rather than focus on perceived or inferred intellectual deficits. Third, it must focus on learning assets and strengths as the basis for the development of new learning skills. Finally, it must be a dynamic, ongoing process.

4. Dynamic Assessment

In contrast to the psychometric tradition, which treats intelligence as a static product, Vygotsky (1978) perceives intelligence as a dynamic process that changes with development and learning. As a learner interacts with other people, his or her learning stimulates cognitive development. As cognitive development proceeds, a "zone of proximal development" can be delineated to reflect the gap between the learner's actual development, and his or her development potential. This potential enables the psychologist or teacher to help improve the learner's mental ability. In this sense, assessment is dynamic and helpful. Vygotsky (1978) defines the zone of proximal development as:

> The distance between the actual development level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers.

The size of this zone is determined by adapting conventional IQ tests within a "test-teach-test" format. An individual is first given a test (or part of it) to determine which items he or she can perform correctly and which present difficulty. After this initial performance, the psychologist or teacher provides help in completing the difficult items, by appropriate prompting until competence is achieved. Finally, similar test items are administered again to ascertain the degree to which learning has helped the student to perform better.

The **zone of proximal development** is indicated by the number of prompts given in the teaching phase and by their transfer effect. An individual who has received few prompts and who is able to solve many problems of a similar nature has achieved high transfer and, by implication, has a high learning potential. Clinical observations of the learning process would yield rough calibrations of a person's ability to benefit from prompting and learning, speed in learning new materials, and transfer capabilities. However, it should be recognized that much of this learning also depends on the nature and quality of the prompts given. The prompts are only appropriate and effective when the teacher or psychologist involved knows the componential features of both initial and transfer tasks and is able to apply them effectively. Dynamic assessment, when compared with traditional psychometric methods, seems to yield a richer understanding of human intelligence.

5. The Budoff Method

Budoff's method of assessment begins with testing the individual in a series of both familiar and novel tasks. The results provide a base-line measure that can be compared to subsequent performance. This is the *diagnostic* phase.

The second phase involves a teaching and learning process, in which the tester (the teacher) explains to the testee (the student) the principles of thought and logic required to perform the above tasks. Teachers can impart either general reasoning skills or basic concepts. Then tasks in the original test are rearranged from easy to difficult and the testee is asked to do them again, beginning with the easiest item and proceeding to progressively more difficult ones. This methodology enables the assessment of two dimensions of the effectiveness of the teaching: 1) whether the student's performance has improved; and 2) the degree of improvement. From these clinical observations, the data can be acquired on the learning potential of the testee, and the manner and speed with which performance is being improved. The student's preferred cognitive modality can also be identified; that is, whether auditory or kinesthetic inputs are most helpful in attaining an improved understanding.

The above method of assessment can be used for a single task or a number of tasks. In the case of several tasks, a battery of tests is employed. So far, Budoff's research has concentrated on assessment using a single-task approach. He also believes in the use of non-verbal tests such as the Kohs Block Designs Test (1932) and the Ravens Coloured Progressive Matrices (1965) for assessing and improving children's reasoning abilities. Because both the test items and the training exercises are free of cultural bias, children of diverse backgrounds can gain true cognitive experience unhampered by negative situational factors such as the effects of failure in school, cultural block, and language deficiencies. This approach has been proven effective in improving children's cognitive ability scores (Budoff, 1974; Budoff and Hamilton, 1976).

A parallel approach to Budoff's assessment method is found in the Soviet Union. Wozniak (1975) described an approach in which the child being assessed is required to perform a task independently. The examiner then tutors him or her on the performing aspects of the task that were failed. Finally, the child is asked to perform the same task alone. However, the Soviet approach uses no normative evaluation procedures, nor does it specify the need for a non-verbal orientation.

6. The Feuerstein Method

Feuerstein's major concern has been to assess the untapped cognitive potential of individuals, particularly the culturally deprived, and to remedy any deficiencies through an active intervention process that helps the individual build a new and effective cognitive structure. He believes that the acquisition of such a structure enables a person of low mental ability to become more adaptable, flexible, and therefore generally more capable of comprehending, planning, and solving problems.

The Meaning and Effects of Cultural Deprivation

A clear distinction is made between cultural *deprivation* and cultural *difference* in Feuerstein's scheme of thinking. The culturally different individual is simply one who is a member of a minority group within a society dominated by a mainstream culture that is different. Because of this background, the individual may suffer from not being tuned into what is going on in society and/or from a lack of economic opportunities. But such deficiencies may change as the individual acquires the essential skills of achieving success within the social structure. In any case, a strong affiliation with his or her own minority culture can often provide the culturally different individual with a sound psychological foundation to deal effectively with the requirements and expectations of the dominant culture.

A culturally deprived individual, on the other hand, is a person who is deprived of his or her own background culture - one who has in effect, become alienated from any cultural affiliation. This alienation may be caused by any number of single or interactive factors: social class, physical factors, religion, psychological factors, and learning. Whatever the cause, cultural deprivation often leads to poor cognitive ability, which reduces the individual's chances of keeping up with peers and the school's expectations. Even manifestations such as a lack of motivation and the ability to learn and change in therapeutic and remedial situations can signal cultural deprivation. It is not difficult to realize that, under these circumstances, the use of conventional IQ tests for assessment would only compound an already unfavourable situation if they indicated that an individual has a low IQ score. A different approach of assessment is needed if change is intended to be a logical follow-up of that assessment.

In their investigation into the problems confronting the culturally deprived, Feuerstein and Hoffman (1982) concluded that such individuals suffer from "a disruption of intergenerational transmission and mediational process". Not only are they deprived of the learning experiences mediated by parents that normally should occur during childhood, but they also are prevented from developing a sense of order about the environment and from formulating effective cognitive schemes with which to handle daily life problems.

In normal childhood, interactions between child and parents are typically replete with examples of mediated learning. In this process, the parents selectively accept or reject certain stimuli to present to the child; in effect, they filter, frame, schedule, and sequence events, and mediate relationships of time, space, causality, and affection. Through these experiences, children gradually construct their cognitive structures and link themselves with their cultural past and social reality.

It must be said that every culture provides a structure within which the organization, interpretation, and understanding of events and relationships can occur through exposure and experience. It is this organization of experience that links individuals to their society. It also enables them to be flexible, adaptable, and creative in rooting themselves with the past, handling the present, and anticipating the future in the context of their cultural milieu. Language plays an important part in this process, as do other forms of communication and sharing.

Feuerstein suggests that a mediated learning experience (M.L.E.) such as occurs between children and parents in the normal process of development, is necessary to initiate every member of a society into the universal cognitive structure of that society. For those who have been deprived of this initiation, Feuerstein believes that the introduction of a mediating learning experience intended to fill in the gaps left by deprivation is helpful.

If we assume that a culturally deprived person, whether a child or adult, has a much higher potential than he or she has been able to demonstrate in conventional IQ tests, then a teacher, acting as a mediator, can help improve this person's cognitive ability by providing alternative perceptions and interpretations of the world. In order to do so, the teacher must first gain an understanding of both the individual's intelligence and cognitive potential.

7. The Learning Potential Assessment Device

Feuerstein uses a dynamic assessment approach that he calls the Learning Potential Assessment Device (L.P.A.D.). He begins with a clear delineation of psychometric goals, as follows:

1. to assess students' cognitive modifiability by observing them function in situations designed to produce change;

2. to assess the extent of modifiability in terms of cognitive functioning, and how significant a student's attained functioning is in the hierarchy of universal cognitive operations ranging from perception to abstract thinking;

3. to determine the transfer value of what is learned in one area to other areas of operations;

4. to identify the student's preferred modalities for learning and the problem-solving strategies that work best.

The assessment process engages both the student and the assessor or counsellor in active modificational operations. As the client performs the given tasks, the counsellor intervenes whenever necessary to present alternative ways of perceiving, interpreting, and problem-solving. Any change is noted, as well as the amount of intervention required to produce the change. On the basis of these observations, the counsellor then predicts the level of change potential.

To facilitate this dynamic assessment process, conventional testing procedures have been modified to accommodate new goals. The following four characteristics make up the essence of the new methodology in assessment:

1. The tester acts as a responsible, concerned and individualized counsellor rather than a standard neutral questioner.

2. The test question or task items must be clear and well sequenced. They should permit ready assessment of the individual's present level of cognitive functioning and the way in which his or her problem-solving skills and relational thinking may be changed.

3. The assessment must focus on the process of intelligence rather than on its product. Emphasis is placed on the change in cognitive skill.

4. The responses that reflect both the process and product of cognitive operations are viewed as salient indicators of potential.

The L.P.A.D. thus helps to tap an individual's acquisition components and performance components of intelligence, and identifies where deficits lie. Below are detailed lists of the impairments that may be found among culturally deprived persons in three levels of cognitive functioning: input, elaboration, and output.

A. The Input Level

1. Blurred and sweeping perception.
2. Unplanned, impulsive, and unsystematic exploratory behaviour.
3. Lack of or impaired receptive verbal tools that affect discrimination (e.g., objects, events, relationships, are not given appropriate labels).
4. Lack of or impaired spatial orientation - the absence of stable systems of reference impairs the establishment of topological and Euclidean organizations of space.
5. Lack of or impaired temporal concepts.
6. Lack of or impaired conservation of constancies (size, shape, quantity, orientation) across variation in these factors.
7. Lack of or deficient need for precision and accuracy in data gathering.
8. Lack of capacity for considering two or more sources of information at once; this is reflected in dealing with data in a piecemeal fashion rather than as units or organized facts.

B. The Elaboration Level

1. Inadequacy in the perception of the existence and definition of a problem.
2. Inability to select relevant versus non-relevant cues in defining a problem.
3. Lack of spontaneous comparative behaviour or a limitation of its application by a restricted need system.

4. Narrowness of the psychic field.
5. Episodic grasp of reality.
6. Lack of or impaired need for pursuing logical evidence.
7. Lack of or impaired interiorization.
8. Lack of or impaired inferential-hypothetical ("if...then") mode of thinking.
9. Lack of or impaired strategies for hypothesis testing.
10. Lack of or impaired ability to define the framework necessary for problem-solving behaviour.
11. Lack of or impaired planning behaviour.
12. Non-elaboration of certain cognitive categories because the verbal concepts are not part of the individual's verbal inventory (on a receptive level) or because they are not mobilized at the expressive level.

C. *The Output Level*

1. Egocentric communicational modalities.
2. Difficulties in projecting virtual relationships.
3. Blocking.
4. Trial-and-error responses.
5. Lack of or impaired verbal tools for communicating adequately elaborated responses.
6. Lack of or impaired need for precision and accuracy in communicating responses.
7. Deficiency of visual transport.
8. Impulsive acting-out behaviour.

Deficits in the three levels of operation are fluidly interactive and must be considered as a whole. In terms of the need for mediation, the research (Narrol, Silverman, and Waksman, 1982) has demonstrated that an individual is amenable to remedial help if he or she exhibits deficits at either the input or output phase. In contrast, elaboration deficits may reflect a limited ceiling in cognitive capacity, which would mean that there is not a great deal of room for cognitive reconstruction.

Even though the L.P.A.D. is concerned with an understanding of cognitive processes as a basis for remedial work, there are some weaknesses in the instruments employed. For one thing, the beginning and the end of the test-teach-test process tend to measure cognitive ability in terms of standardized units. In addition, because this kind of clinical assessment requires each assessor to approach the interpretation of results as well as the mediation in his

or her own way, the outcomes of the assessments do not lend themselves easily to comparison. Finally, the basic assumption that everyone is modifiable is an overgeneralization.

Nevertheless, when viewed as a special assessment method aimed at facilitating therapeutic measures, the L.P.A.D. serves to meet the needs of people who are culturally deprived. Utilized properly, tests using the dynamic assessment approach can yield the following information about the testee:

1. Capacity to grasp an underlying principle.
2. Amount of work required to teach a principle.
3. Capacity to transfer what is learned to solve new problems.
4. Modality preference in cognitive operations.
5. The effects of mediation strategies on changing cognitive structures.

According to the study of cross-cultural assessment by Sundberg and Gonzales (1981), the Feuerstein L.P.A.D. approach contributes significantly towards clarifying the special needs of minority individuals and groups. The following examples of L.P.A.D. instruments show the characteristics of this dynamic assessment approach. Any reader who is interested in more comprehensive information about these tests should seek out the original tests for reference.

8. Examples of Item Types

A. Organization of Dots

This test requires the testee to project shapes onto an amorphous cloud of dots. The operation involves the application of the full range of encoding and projective skills. It taps planning behaviour, search strategies, impulsive behaviour, and segregation skills, as well as such executive functions as checking and monitoring. It arouses interest easily and is simple to administer.

B. The Representational Stencil Design

This test permits the counsellor to study how testees develop their problem-solving behaviour. The testee is first supplied with a series of stencils, then presented with a model figure and asked to construct mentally that figure by superimposing one or all of the stencils upon each other in the correct sequence. By observation, the counsellor can gain information about the degree of reflective thought used, executive processing of monitoring, impulsive behaviour, and trial-and-error approaches.

C. Complex Figure

The testee is first required to copy a complex figure and the tester notes both the details of the drawing produced and the sequence of copying. The next task is to reproduce the figure from memory. Mediation consists of teaching the sequence of copying the figure, after which the test is given again.

D. The Plateaux

This test, developed by Andre Rey as one of the first in a sequence (Rey, 1950, 1953; Feuerstein, 1968), consists of four boards, each approximately eight inches square and containing nine buttons symmetrically positioned on it. One of these buttons is permanently fixed. The task requires the testee to discover and subsequently recall the location of the permanently fixed button on each board.

E. Functional Associative Recall

The testee is presented with a number of object drawings, each having a series of transfigurations of reduced clues. He or she is first required to identify the objects and their associated simplified drawings. When the cues are removed, the next task is to recall the objects. By observing this performance, the counsellor can determine the testee's real and potential mnemonic strategies and stable recognition of an object form as it changes through a gradual reduction of associative cues.

F. Raven's Matrices and Set Variations

The testee is trained to apply Raven's (1965) coloured progressive matrices, followed by the L.P.A.D. Set Variations. The tasks involve a series of progressively more difficult completion exercises requiring Gestalt perception. By observing the testee's learning progress, the counsellor can detect abilities of analogy, logical operations, transfer, and generalization.

9. The Kaufman Method

Kaufman (1983) is concerned with the assessment of fluid intelligence and achievement. The Kaufman Assessment Battery for Children, also called the K-ABC, measures intellectual functioning in two broad categories: Mental Composite Processing and Achievement. Mental Composite Processing and Simultaneous Processing are assessed through close observation, as the tests are administered individually.

The K-ABC is made up of 16 subtests designed to measure different elements of children's intellectual capacity. Ten of these are used to assess intellectual functioning, while the remaining six assess achievement. The battery is standardized on a nationwide

sample of normal and exceptional students between 2.5 and 12.5 years of age. The tests are administered individually and involve only rudimentary verbal skills. In fact, a non-verbal scale is included to test children with language differences or language disorders. Norms have been established to reflect sociocultural factors, which makes the tests useful for assessing those from ethnic minority backgrounds.

The number of subtests used for assessment varies depending on the age of the child. The guideline is: seven subtests for age 2.5, nine for age 3, eleven for ages 4 and 5, twelve for age 6, and thirteen for ages 7 to 12. No child is given more than thirteen tests. The testing time ranges from 35 to 85 minutes, depending on the age and speed of the subject.

When administering these tests, the teacher first makes sure that the testee understands the tasks involved before performing them. The scores are then interpreted with flexibility and care in order to decide what post-test intervention strategies should be taken. Interpretation of test scores follows five empirical steps. The tester first transforms the obtained scores into percentile ranks and classifications. Next, the scores on the sequential processing scale are compared to those on the simultaneous processing scale. Third, the mental processing standard scores are compared with the achievement standard scores. Fourth, the mental processing scores are scrutinized to determine strengths and weaknesses among the subtests used. Finally, assessment is made on the basis of strengths and weaknesses on the achievement scale. What follows is a brief description of scales and subtests used in the K-ABC battery.

A. Sequential Processing Scale

Subtest 1. Hand Movements (2.5 to 12.5 years)

This scale measures the testee's ability to perform a series of hand movements in exactly the same sequence as demonstrated by the tester.

Subtest 2. Number Recall (2.5 to 12.5 years)

The testee is required to repeat a digit sequence in the same order as the tester presents it.

Subtest 3. Word Order (4 to 12.5 years)

A series of silhouettes is verbally described to the testee who is required to identify and touch each silhouette in the same sequence as they are described. An interference task is incorporated into the presentation of the complex items.

B. Simultaneous Processing Scale

Subtest 1. Magic Window (2.5 to 11 years)

The tester partially shows a picture behind a narrow window on a screen. The testee is required to name the picture while it is partially exposed.

Subtest 2. Face Recognition (2.5 to 12 years)

The testee is briefly shown a photograph of one or two faces. He is then required to pick out the face(s) from memory from a group photograph.

Subtest 3. Gestalt Closure (2.5 to 12.5 years)

The testee is required to name an object or a scene from a partially complete ink-blot drawing.

Subtest 4. Triangles (5 to 12.5 years)

The testee is required to assemble several identical triangles into an abstract pattern to match a model.

Subtest 5. Matrix Analogies (5 to 12.5 years)

The testee is required to complete a visual analogy by using the most suitable graphic or geometric form of his or her choice.

Subtest 6. Spatial Memory (5 to 12.5 years)

The testee is shown a page of pictures arranged in a specific order. He is then required to recall the spatial order of the pictures correctly.

Subtest 7. Photo Series (6 to 12.5 years)

The testee is required to arrange photographs of an event in chronological order.

C. Achievement Scale

Subtest 1. Expressive Vocabulary (2.5 to 12 years)

The testee is required to identify the object in a photograph.

Subtest 2. Faces and Places

The testee is shown the picture of a well-known person or place (real or fictitious) and is required to make an identification.

Subtest 3. Arithmetic (3 to 12.5 years)

A knowledge of arithmetic is tested by requiring the testee to count, compute, and do other mathematical operations.

Subtest 4. Riddles (3 to 12.5 years)
The testee is given a list of characteristics of a concrete or abstract concept, and is required to make inferences and name the concept.

Subtest 5. Reading/Decoding (5 to 12.5 years)
The testee is asked to identify letters and read words.

Subtest 6. Reading/Understanding (7 to 12.5 years)
The testee responds to written commands.

In appraising the appropriateness of the K-ABC battery for the assessment of the intellectual ability of minority students, one may refer to the theoretical basis on which the tests are constructed. The concept that sequential and simultaneous processing is distinctly different from mental processes has its origin in the neurophysiological concepts of Luria (1966), who felt that the left and right hemispheres of the human brain perform different functions. While sequential processing handles tasks such as the habitualization of skills, rote memory, and narration, simultaneous processing deals with spatial organization, linguistic expressions, and comparison and contrast tasks. A number of empirical studies that support a distinction between mental composite processing and achievement are cited in the K-ABC interpretation manual.

The fact that the K-ABC battery separates the mental processing scores from the achievement scores may explain why it is more useful in assessing the intellectual ability of minority children than are conventional tests such as the WISC-R and the SOMPA. Various cultural groups have different cognitive processing styles, as well as different relationships between simultaneous processing and sequential processing. Kaufman and Kaufman (1983) have studied the effect of the K-ABC on Hispanic children and have found the assessment to be more accurate than results obtained from the WISC. Whereas the K-ABC Achievement Scale uses a predominantly visual approach, the WISC-R Verbal Scale places unfair emphasis on language skills. The flexibility in interpretation of the K-ABC also helps the tester derive richer information with which to design effective post-test intervention strategies. In fact, the tester can clearly determine the characteristics of the testee's cognitive performance and verbal achievement.

10. Discussion

It seems, on the basis of the preliminary research results, that both the L.P.A.D. and the K-ABC are more appropriate assessment devices for testing minority children than the

WISC-R and SOMPA. In certain ways, Feuerstein's method might be considered more dynamic than Kaufman's, but both share similar areas of emphasis and styles. Both methods de-emphasize factual information and general learned content, and instead concentrate on problem-solving tasks of a non-verbal and culture-fair nature. Both incorporate a training component to help the testee who doesn't understand the tasks involved. The Feuerstein approach trains the testee in order to measure learning potential, while the Kaufman method does the same thing so that more reliable scores can be obtained.

On the whole, the innovative approaches to mental ability assessment have shifted the focus away from quantitative product scores to qualitative observations and interpretations of the process of mental ability functioning. Dynamic assessment is based on the assumption that intelligence is a multifaceted, multidimensional, and fluid construct that continually undergoes change. This approach attempts to determine not only the characteristics of the various components of intelligence, but also how they function. One way of doing this is to use the verbalizations of testees as a vehicle to tap their underlying cognitive processes as they work through various problems.

IV. Towards Non-discriminatory Assessment

1. Principles and Application

The theme permeating the issues, problems, practices, and innovations discussed in the previous chapters can be summed up in a single sentence; namely, evaluation procedures applied to minority students should be valid for the purpose for which they are being used. A truism? Perhaps; yet it has been necessary to present the evidence and the arguments to show that the assessment and placement of minorities as constituted in most school jurisdictions represent the most potent factors in retarding the scholastic progress of large numbers of minority students.

Our concerns have been backed up by the conclusive demonstrations of disparity in the proportionate distribution of students in program categories in Canada and the United States. References to the various reviews in the area of non-discriminatory assessment have been presented. These have provided analyses, guidelines and recommendations for changing the system by improving the assessment and placement processes, thereby leading to a reasonable degree of educational equity (DeAvila et al., 1976; Dent, 1976; Deutsch, 1967; Mercer, 1973; Samuda, 1975, 1980; Sattler, 1982; Ysseldyke and Algozinne, 1982). The research results have been bolstered by the public outcry for a fairer system leading to certain changes in the policies of education. Now, it is required that tests and evaluation materials must be provided and administered in the student's own language, and be validated for the purpose for which they are used. They must be processed by trained personnel preferably familiar with the cultural and linguistic backgrounds of the students upon whom the tests are being utilized, and they must be tailored to areas of specific educational need. From another point of view, the new policies go beyond the validity of tests themselves; of equal importance, they require that program placement should also be tailored to the needs of the student. Unfortunately, such policies have not been universally implemented and many fail to recognize that the problem of bias is multifaceted (Jones, 1985; Reschly, 1981).

In the Canadian context, pressure from a number of community groups, in the metropolitan Toronto area especially, and from the Ontario Human Rights Commission, led to the formation of a Cabinet Committee on Race Relations and the resolve of the provincial government to assume a leadership role. On several occasions, the Liberal Premier, David Peterson, singled out the issues of the assessment and streaming of minority students as being of central concern. On March 21, 1986, at the Provincial Race and Ethnocultural Relations Conference in Toronto, the then Minister of Education, Sean Conway, pledged to

develop a provincial race relations policy that would serve as a prototype for Ontario school boards. The essential focus of that policy was student assessment and program placement.

This chapter represents the culmination of a series of meetings by a consultative committee comprising representatives from school boards, universities, various agencies, and officers of the Ministry of Education, to address those issues and problems. The report of the committee was based on a literature review as well as input received from experts in the area of minority testing (Ontario Ministry of Education, 1987).

The essential conclusion of the consultants was that change in the area of non-biased assessment will depend not only on the knowledge of education policy makers and school personnel but also upon their awareness and sensitivity in such crucial factors as: a) current research, b) cultural and linguistic biases inherent in currently available ability tests, c) different learning styles requiring a variety of teaching modes, d) curriculum that is relevant and reflective of diverse racial and cultural realities and which recognizes the contributions of minority groups, e) opportunities within classrooms for students to express and share their experiences in a variety of modes (verbal, written, and artistic), f) assessment conducted on a regular and continuous basis, incorporating both formal and informal evaluation procedures, and alternate assessment methods based on developmental theory (e.g., dynamic and capacity assessment) in addition to conventional standardized tests.

The consultative committee directed its efforts towards three basic goals: to prepare a list of answers to questions posed; to enunciate a list of guiding principles that address the needs and problems identified in the terms of reference; and to develop a list of recommendations to effect change and improvement with regard to the validity of the assessment and placement of minority students. The latter task was organized and directed to decision makers at four different levels, namely, provincial (policy), university, school board, and school.

The principles promulgated in the report were culled from the research literature in the United States and Canada where the concern for better methods of minority student education are almost identical, for the issues are universal and the objectives similar. Whether we consider the plight of Haitians in the Miami Dade school system or whether we contend with the assessment and placement of Portuguese children from the Azores in the schools of metropolitan Toronto, the same problem exists.

The principles enunciated in the following pages go beyond the mere choice and application of testing techniques. Rather, the thrust is towards levels of responsibility and accountability in implementing change. Also included in this chapter is a summary of the changes actually taking place in one school board that has taken to heart the gist of the committee's recommendations. The conclusions and recommendations of the consultative committee, outlined below, are not specific to Ontario alone but can serve as a model for

all systems of education seeking to establish equitable and non-discriminatory assessment and placement for all students. The recommendations and principles go beyond the mere choice and application of testing techniques. The responses of the consultative committee were directed towards specific tasks, given below in italics, that had been predetermined by the evaluation branch of the ministry as outlined below.

2. Responses of the Consultative Committee

A. Summarize the mechanisms and materials employed to informally and formally assess, place, and program recent immigrant and visible minority students in Ontario and identify their strengths and weaknesses of assessment

1. A proper response to this task demanded a search of the current research and literature dealing with assessment and placement programs for minority students: e.g., Samuda and Crawford, 1980; Cummins, 1984, 1986; MacIntyre, 1985; Deosaran, 1976 (Toronto Board of Education); Pascual-Leone, 1987b.

2. While tests presently being used give a sense of a pupil's current level of functioning in terms of selected skills and abilities related to the culture on which the tests are based, there is often misinterpretation of what has been assessed and failure to assess other and potentially more important competencies.

3. Effective assessment models should: a) reflect the concept of equality of education for a just society taking into account pupils' learning styles, motivation patterns, linguistic variations, cultural variations, and diverse capacities; b) put assessment into a broader and more appropriate educational context to include how it relates to and reflects instruction, how parental involvement interacts with the assessment process, and what the knowledge base, mind set, role definition, and relationships are of the people in the process, namely, pupils, parents, psychometric resource staff, classroom teachers, and administrators.

4. Current weaknesses in assessment program placement practices include: a) a lack of explicit direction in legislation with regard to special education/IPRC processes as these pertain to recent immigrants, culturally and/or racially diverse or visible minority students and their parents; b) misconceptions on

the part of some test givers and test result users that intellectual capacity has been assessed when, in fact, what has really been measured is acquired knowledge as defined by mainstream middle-class test developers; c) failure to realize test limitations and that the current practice of relying on standardized testing procedures is inadequate. No test, whether formal or informal, will be sufficient in and of itself, for it is a fallacy to think that more and better of the same thing will lead to assessment equity.

B. Identify the barriers that adversely affect the assessment and program opportunities of children because of their race, culture, ethnicity, and language.

1. Monolingual/ethnocentric tests and testers.
2. Inadequate and inaccurate knowledge of tests, testing, and minority students.
3. Lack of a well-defined policy regarding assessment and program placement of minority students and/or discrepancies between policy and practice.
4. The tendency to maintain the status quo because of the implications of change (e.g., too expensive to change test instruments and materials and the difficulty of changing the personal beliefs and behaviours of teachers).
5. Underutilization of the student's home language, and cultural background in the school curriculum.
6. Insufficient knowledge and awareness on the part of teachers of the unique and different individual and cultural learning styles.
7. Inadequate training and sensitivity to the problems and needs of minority students on the part of school-based staff, especially those in guidance and counselling positions.
8. Lack of understanding on the part of educators of behaviours representative of diverse cultural backgrounds.
10. Unconscious stereotyping and prejudice on the part of educators that reflect patterns of interaction and expectation within the broader community.
11. Inadequate communication with parents and significant others who know the student.
12. Faulty notions of what tests really measure and misconceptions of the information that tests do actually yield.
13. Insufficient information and knowledge on the part of policy makers concerning the state of the art in testing.
14. Inconsistent assessment practices.
15. Lack of ongoing assessment and lack of open-ended program placement.

16. Erroneous and unfair practices of labelling students based on one test result or limited assessment data.
17. A mind set that achievement difficulties in students are unalterable.
18. Interpretation of psychological tests as indicators of expectations for student performance rather than as indicators of necessary program intervention.
19. Policies and practices that are contradicted by research (e.g., testing immigrants with standardized tests within two years of arrival).
20. Lack of ministry and board level policies and resources regarding assessment and placement of minority students.
21. Prevalence of static homogenous grouping in classrooms and schools.
22. Lack of booster or transitional programs to encourage and help students move to different levels and experience different program options.
23. The prevalence of transmission-oriented learning environments.
24. Inflexibility with respect to modes of acquiring and expressing understanding and knowledge, i.e. the primacy of printed words.
25. Insufficient information given to parents and students concerning program choices and the implications of these choices at critical transition points.
26. Inadequate identification and utilization of resource personnel in schools.

C. Identify causes of overrepresentation of some minority groups in lower academic streams.

1. Low teacher expectations.
2. Low student expectations.
3. Curriculum that does not include the multicultural backgrounds or contributions of non-whites to the society as a whole.
4. General rigidity of the system and the curriculum that does not utilize or take advantage of cultural diversity as positive teaching resources.
5. Negative impressions of ESL and/or heritage language, often perceived as hindrances rather than advantages.
6. Indications of systematic racism in society and in schools as supported by current research.
7. Pedagogy that is primarily based on a passive model of teaching and learning as opposed to interactive teaching-learning models.
8. Non-recognition and/or non-acceptance on the part of some mainstream educators of different values, behaviours, and learning styles of various minority student groups.

9. A penchant for homogenous classroom groupings.
10. The tendency to group ESL students in basic level or special education programs (e.g., ESL viewed as a disability/learning handicap).
11. Lack of guidance personnel at both the elementary and secondary school levels with adequate training in antiracist education, including non-biased assessment.
12. Insufficient interaction and interface between elementary and secondary school personnel (teachers, counsellors, and principals).
13. Lack of parental involvement in student assessment, and in program placement decisions.
14. Inappropriate assessment in some cases; and in others, no assessment at all when in fact assessment should have occurred.

D. Identify strategies that support the appropriate placement and educational progress of children with diverse racial, cultural, ethnic, and linguistic roots.

1. Involve the parents in the student's education.
2. Promote strong home-school communication links.
3. Promote a positive view of bilingualism, heritage languages, and multiculturalism.
4. Promote the initiation of professional training for school psychologists and selected teachers in non-biased testing (e.g., dynamic assessment and capacity testing).
5. Create and offer training courses for teachers in the area of formal and informal assessment.
6. Use multiple assessment instruments and involve more than one approach to assessment.
7. Promote heterogenous groupings in classrooms.
8. Promote strategies for cooperation rather than competition within the curriculum (e.g., role playing simulating advocacy positions).
9. Promote interactive small groups in planning classroom instructional strategies.
10. Offer a curriculum that is accurate and interactive in representing minorities in the teaching force.

E. Identify ways and means of ensuring a multifaceted approach to student assessment in the broad based education context.

1. Employ both formal and informal methods of assessing students as articulated below.
2. Promote opportunities for students to interact and develop skills and competencies such as leadership and social skills through co-curriculum activities (social, sports, cultural, art groups) that would enable staff to observe the students in non-classroom, non-academic settings and situations.
3. Develop training courses for educating staff in both formal and informal assessment procedures and require professional staff to become skilled in the various assessment modes.
4. Develop policies and practices that link assessment to program response/modification rather than assigning students to a particular existing level or "status quo" program.
5. Develop a policy and procedures that require teachers and other relevant education staff to assume a collaborative approach using a variety of assessment data in making decisions about program placements for students.
6. Focus on the classroom teacher as a key person in assessing the student and promote the need for various ongoing assessment procedures in the context of daily classroom activities.

In the following section we provide the guiding principles enunciated by the committee as they relate to attitudes, organizational, and pedagogical concerns, as well as the actual issues of assessment itself for minority groups.

3. Guidelines for Assessment and Placement of Minority Students

A. Attitudinal:

1. Available empirical evidence indicates that mental capacity and learning potential are equally distributed across all races, ethnic groups, and social classes. Accordingly, equality of educational opportunity should result in equality of educational outcome. There are, therefore, no empirical grounds to support overrepresentation of some minorities in special education, vocational or basic level programs, or underrepresentation of minority students in gifted/enrichment programs.

2. Knowledge of the learning history, cultural background, and life experience of children is essential for the appropriate assessment and placement of students within the school system. For this reason, it is imperative to involve parents in the process of assessment of their children, and to clearly apprise them of the implications of various decision options regarding program choices.

B. Organizational and Pedagogical:

1. The learning environment is a significant factor in the student's cognitive growth, academic progress, and social development. Informed assessment of students is more likely to occur in classrooms characterized by an *interactive* teaching-learning environment, that is, a setting where students have an opportunity to participate actively in the learning process and to show their progress and learning styles by expressing and sharing their experiences in a variety of modes.

2. Program placement must be open-ended to allow students access to a variety of program options. Empirical evidence does not substantiate academic advantages of streaming students except for the very gifted.

C. Assessment:

1. Assessment should be used for purposes of intervention, mediation, and programming, and not just for assigning students to a particular level or program.

2. Assessment by education staff must be informed with respect to the test being used and to the students being tested.

3. Assessment of mental-capacity and general intelligence is intended to recognize the latent mental capacity and learning potential of a student, whether his potential is manifested or not in the student's actual performance. A comprehensive assessment practice should therefore encompass the following methods of assessment:

Formal (standardized) models including a) conventional psychometric tests (knowledge-based), such as, achievement, intelligence, and socialization; b) tests based

on developmental theory (e.g., dynamic assessment mental capacity assessment, learning potential).

Informal (interpersonal) models consisting of a) group assessment that is, assessment of a student in the context of the total school/classroom program (e.g., class tests, academic progress, personal development); b) individual assessment derived from interviews, personal behaviour, socialization, observation (directed and casual).

4. Educators should use the best data available from a variety of assessment models in order to make program and placement decisions in favour of the student. Positive data, whether based on formal (standardized) testing or informal (interactive ongoing) procedures, should be used to override any negative assessment data.

5. To make informed program and placement decisions with respect to the student, it is necessary to assess his or her capacity to learn and grow, not just his/her current knowledge and/or socialization base. Therefore, evaluation of a student's potential depends upon the collaborative judgement of a number of professionals interpreting a variety of assessment data pertaining to the student.

4. Recommendations and Strategies for Change

The consultative committee's report was addressed to four different levels of responsibility: provincial, university, school board, and school. The report also emphasized that antiracist education should encompass knowledge of and sensitivity to multiculturalism, race relations, bilingualism, and affirmative action as well as knowledge of non-biased assessment. The recommendations are given below:

A. Provincial or Policy Level:

Decision-makers should:

1. Develop and publicize a policy statement (i.e., a clear statement of direction) with regard to the assessment and program placement of students.

2. Develop a "student assessment resource guide" that clearly addresses assessment and placement as well as the programming of minority students.

3. Communicate to education communities current research pertaining to antiracist education and non-biased testing as well as citing positive (board level) practices for assessment and placement of minority students.

4. Fund research and development in the area of "non-biased assessment" and support activities designed to operationalize such enterprises at the school level.

5. Help to fund innovative "assessment and placement" programs in various selected boards to help establish an experience base for other boards to reference.

6. Develop non-biased approaches to assessment as well as conducting standardized testing (achievement, aptitude, psychological, capacity) in the student's native tongue - if and where deemed appropriate.

7. Select a team of experts in the area of capacity testing comprising theorists and practitioners to develop and implement, on a pilot basis in selected school boards, instruments for non-biased assessment.

8. Collaborate with the Ministry of Citizenship and relevant parent groups for the purpose of enhancing public awareness and community education regarding the assessment and placement of minority students.

9. Establish a committee to a) periodically review assessment and placement policies and practices as these pertain to minority students at the school board and school levels; b) serve as an appeal board in matters pertaining to assessment and program placement of minority students; c) periodically review the hiring and selection practices as these pertain to professional staff at the ministry, university, and board levels; d) periodically review admission procedures at universities and, especially faculties of education as these pertain to potential teacher candidates from minority groups.

B. University Level (Faculties of Education):

It is recommended that:

1. Registration requirements for psychologists who work in educational settings include knowledge and expertise in the area of non-biased assessment (e.g., capacity testing). Certification requirements should also be tailored to, and focused upon the needs of the provincial school population.

2. University faculties of education should develop and make available to school board education staff, courses in the area of antiracist education including topics such as multiculturalism, bilingualism, race relations, and non-biased assessment.

3. All professional staff involved with assessment and placement of minority children (psychologists, guidance counsellors, special education teachers) should have background knowledge in the area of antiracist education.

4. Faculties of Education should develop and offer courses in testing and evaluation with a focus on the administration of various types of standardized testing, including capacity testing and dynamic assessment to be used in schools.

5. Professional staff involved with assessment and placement of minority students should have skills not only in administering various types of tests, but also in interpreting and communicating the test results to parents.

6. University faculties of education and school boards should collaborate for the purpose of developing and delivering programs designed to respond to teacher training needs and 'continuing professional development needs' at both the pre-service and in-service levels. **Pre-service** programs should include introductory courses in antiracist education as well as courses in student evaluation in general and the assessment of minority students in particular. **In-service** training in the area of antiracist education and student assessment should be made available to practising teachers. Boards and faculties should collaborate to provide Additional Qualification courses in these areas.

7. Faculties of education and other related disciplines (e.g. Psychology and Sociology) should make a concerted effort to hire professional staff with training and knowledge in the area of antiracist education. The various university disciplines and departments should also collaborate to develop common, joint course offerings related to staff development at both pre-service and in-service levels.

C. School Board Level:

It is recommended that boards:

1. a) Undertake a review of current policies and practices regarding assessment and placement of minority students so as to determine their adequacy and fairness in relations to emerging Ministry of Education guidelines and current research in the area of non-biased assessment; b) conduct a survey of student populations on a regular basis to determine actual program placements of minority students; c) where data indicate a disproportionate number of minority students in special education programs, basic level or vocational courses, and/or underrepresentation of minority students in gifted or 'enriched' programs, develop and/or refine policy and procedures to ensure a more equitable distribution of minority students.

2. Encourage and expect administrative personnel (supervisory officers, principals, resource teachers) to assume a leadership role in the area of antiracist education and non-biased assessment.

3. Develop policy and practices that link assessment to program response and modification, rather than merely assigning students to a particular existing level or 'status quo' program.

4. Develop a policy and procedures that require teachers and other relevant education staff to assume a collaborative approach using a variety of assessment data in making decisions about program placements for students. This collaborative approach would need to include the student's parent or guardian.

D. School and Classroom Level:

It is recommended that:

1. School principals should assume a leadership role at the local school level with regard to antiracist education and non-biased assessment of minority students.

2. The principal and teachers should evaluate current student assessment and program placement practices in the school, and collaborate on improvements as necessary. For example, they should investigate ways in which non-biased assessment practices can be promoted in the school, and examine the relationship between assessment and instruction in the classrooms.

3. In each school the principal and teachers should develop a 'language arts policy' (in relation to ministry and board language guidelines) that reflects the particular nature of the local school community and contains strategies for non-biased assessment.

4. The principal and teachers should develop a school level policy and practices for communicating with parents.

5. To the extent that the principal is responsible for the hiring of school staff, consideration should be given to bringing in staff who are knowledgeable and skilled in the area of antiracist education and who represent the community being served from the viewpoint of language, ethnicity, race, and culture.

5. A Model Case Study

The Egerton Ryerson Board of Education (pseudonym) was chosen as an example because its procedures appear to signify the ways in which the principles and recommendations given in this chapter can be realized. This board also encompasses a culturally diverse area where sizable numbers of visible minorities reside, and where the administrators, professional consultants, and teachers have sought to cope with the problems of assessing and placing immigrant students in as equitable a manner as possible. The Egerton Ryerson board has gone a far way in making adjustments to the systems of assessment and program delivery and therefore it provides a kind of model for other boards. The head of the board's psychological services, and a participant of the consultative committee, supplied the data for what follows:

Establishing Non-discriminatory Psychological Services:

The Egerton Ryerson Board of Education has, for several years, sought to find non-discriminatory ways of assessing students so as to meet the needs of their culturally diverse school population. The input from a task force on testing and streaming completed in June, 1984 was later augmented and elaborated upon by a subcommittee on assessment and psychological services in June, 1985. The policies and practices now in place at Egerton Ryerson represent a kind of prototype of the process by which a school board might tackle the onerous challenge of minority student assessment and placement in a very mixed area.

It is significant to note that board policy requires the involvement of a multicultural consultant when dealing with the cases of minority students who have been in the country for less than one year. Even for those who are not very recent arrivals, but who are experiencing academic difficulties, such consultants are frequently called in for their advice on initiating a program of modification. Special education procedures also affect the timing of assessment that is conducted after the classroom modification has been attempted. The psychoeducational consultant is often involved in observing the student prior to planning for a modification program. When assessment is undertaken, it is done in as broad a context as possible, using the techniques of observation as well as employing both formal and informal methods. In its efforts to cope with the diverse and atypical student population, the board has sought to use a wide variety of new approaches to non-discriminatory assessment.

The Egerton Ryerson board does not depend on a single score or set of scores; instead, minority students are considered for reassessment every three years in addition to the observation procedures as they become more familiar with the language and culture of the school. Moreover, in accordance with the recommendations made above, such assessments are conducted only with the written permission of parents and include a meeting with them to discuss the results. To increase the sensitivity of its staff to the pitfalls of assessment, all professional workers are required to take part in a "racism" conference. In its search for answers to the assessment of minorities, the board has initiated training and research in the use of several innovative techniques mentioned in the previous chapters.

In the area of intelligence tests, for example, the board has undertaken training in the use of the Kaufman-ABC. Some users have complained about the bulkiness of the test and the difficulty of seeing the processing of thought as the student works. They report also the lack of verbal input in the administration of the test.

Jane Mercer's (1979) SOMPA (system of multi-phasic assessment) was also employed. However, the norms are based on California data, and the black students in Toronto do not compare with their U.S. counterparts to the extent that the SOMPA's "estimated learning potential" may not be appropriate.

The Naglieri Matrix Analogies Test is a new instrument originating in the United States with some similarities to the Raven Progressive Matrices. The board has administered three thousand of these tests for the screening of gifted students in the "special needs" schools. The fact that the test also has a short form makes it quick, convenient and easy to administer.

The Extended Similarities Test has also been used and provides additional models from a similarities task. It has been used in some inner-city schools as a predictor of readiness to switch to the basic Level from the vocational secondary or from the basic to the general level. Other new tests employed in the board include the Stanford-Binet (new version) but the results are as yet inconclusive.

Other innovations taking place at Egerton Ryerson include the use of the Vineland Adaptive Behaviour Test to complement the results of intelligence tests; the renorming of the WRAT-R to obtain Egerton Ryerson norms; the adoption of newer and better-normed versions of many academic tests and the use of the Test of Early Reading Ability in several studies.

The board is in the process of exploring measures of language such as the Woodcock-Johnson Language Proficiency Test, revised versions of the Peabody Picture Vocabulary Test, and the Roberts Apperception Test as a projective technique. It is refreshing to note that the psychologists and teachers do not particularly espouse any one test but have specifically stated that although many of the instruments have proven useful, no one instrument has provided a "magic bullet". Rather, careful assessment (including observation and interpretation) that looks at students in as broad a context as possible seems the best current approach. No doubt, the one approach that showed the greatest promise was the methodology espoused by Reuven Feuerstein (already summarized in a chapter 3) whereby a program of instrumental enrichment is linked to the Learning Potential of Assessment Development.

A series of studies (Luther, Murdock, and Stokes, 1985) was conducted in special needs schools at the elementary, junior high, and secondary levels to evaluate the efficacy of instrumental enrichment. The general conclusion was that the results appear to support the hypothesis that the Feuerstein method is beneficial to the cognitive and learning functions of many kinds of students. This is the sort of enterprise that augurs well for the changes advocated throughout this review of minority student assessment and placement in the systems of Ontario.

In the determination of its policies and procedures for assessing students from various cultural, racial, and ethnic backgrounds, the Egerton Ryerson board is at the cutting edge in the employment and training of staff, in the use of various kinds of tests, and, more importantly, in its endeavour to match program modifications with the needs of the culturally diverse student population.

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